Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1) Vapor Intrusion 2015/2016 Results Report

Prepared for

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March 2016

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Contents

Acronyms and Abbreviations

CD	consent decree
COPC	constituents of potential concern
EPA	U.S. Environmental Protection Agency
ERA	engineered response action
F°	Fahrenheit
GIS	Geographic Information System
Honeywell	Honeywell International Inc.
HQ	hazard quotient
IASL	indoor air screening level
ITRC	Interstate Technology and Regulatory Council
N.J.A.C.	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJDOH	New Jersey Department of Health
OSRTI	Office of Superfund Remediation and Technology Innovation
OU	Operable Unit
RAL	Rapid Action Level
ROD	Record of Decision
SGSL	soil gas screening level
SOW	statement of work
VI	vapor intrusion
VITG	Vapor Intrusion Technical Guidance

SECTION 1

Introduction

Vapor intrusion (VI) monitoring events were conducted in December of 2015 as part of the routine monitoring effort being performed at the Quanta Resources Corporation Superfund Site in Edgewater, New Jersey (the Site), as required by the U.S. Environmental Protection Agency (EPA) the Remedial Design/Remedial Action Consent Decree (CD) statement of work (SOW) for Civil Action Number 2:12-CV-7091-SRC-CLW. The CD between Honeywell and U.S. Environmental Protection Agency (EPA) was lodged on November 27, 2012, and became effective on March 11, 2013 (EPA, 2012).

The monitoring events were conducted in accordance with the agency-approved work plan (CH2M, 2014) and the follow-up notification letter to EPA (CH2M, 2015). The winter 2015/2016 monitoring events occurred at 115 River Road, 163 Old River Road, and 103 River Road, which are occupied properties within Operable Unit 1 (OU1). At EPA's request, one additional sample was added at 115 River Road in Building 10 (Q1-IA-46) to monitor the occupied second floor. The objective of these monitoring events were to confirm that the conditions at each building are similar to those previously documented in the 2011 Record of Decision (ROD), specifically as stated on page 29: "although elevated levels of site contaminants" were detected in subslab soil gas, "the detected levels [in indoor air] have not exceeded U.S. Environmental Protection Agency (EPA) guidelines for exposure to indoor air."

The VI monitoring events and the associated evaluations and reporting were performed in accordance with EPA and New Jersey Department of Environmental Protection (NJDEP)–approved work plans and Quality Assurance Plan, and guidance documents (CH2M, 2013, 2014, 2015; EPA, 2015; EPA Office of Superfund Remediation and Technology Innovation, 2015; Interstate Technology and Regulatory Council, 2007; NJDEP, 2013).

In accordance with the agency-approved work plan, when there is a disparity between EPA and NJDEP guidance, the EPA guidance and/or EPA Region 2 standard practices will take precedence, because EPA Region 2 is the lead regulatory agency for the Quanta Resources Superfund Site. However, it should be noted that, historically, the sample collection, analytical, and data-submittal procedures used for the VI monitoring at the Site are consistent with NJDEP (March 2013) VI Technical Guidance (VITG).

SECTION 2

Sampling Methods

Sampling activities were performed according to the procedures set forth in the field sampling plan section of the work plan (CH2M, 2014), with the exception of the deviations detailed in Appendix B and as noted below. Sampling activities occurred from December 14 to December 18, 2015. Weather throughout the sampling event was generally cloudy and unseasonably warm with daily high temperatures ranging from 50 to 59 degrees Fahrenheit. Windows and doors were closed during the sampling event with the exception of one space as discussed in the deviations section. On December 17 and 18, heavy rains were recorded with approximately 1.2 inches of precipitation. Weather was recorded at the KNYC (Central Park, New York City) weather station, which is located approximately 1.5 miles east of the site.

The winter 2015/2016 VI monitoring events had the following chronology:

December 14–15, 2015. Samples were deployed in 163 Old River Road on December 14 and collected on December 15. On December 15, Summa canisters were deployed at approximately half of the 115 River Road locations (Buildings 7/8, 8, 9, 10, and 11).

December 16, 2015. The Summa canisters deployed at 115 River Road on December 15 were collected and the remaining 115 River Road location samples (Buildings 2, 3, 4 and 6) were deployed. One sample that was originally deployed on December 15 in 115 River Road Building 7 was redeployed on December 16 as discussed in Attachment B.

December 17-18, 2015. The Summa canisters deployed at 115 River Road on December 16 were collected. One sample that was originally deployed on December 15 in 115 River Road Building 8 was redeployed on December 17 as discussed in Attachment B. Samples were deployed in 103 River Road on December 17 and collected on December 18.

In total, 20 indoor air, four crawl space air, four outdoor air, and three field duplicate samples were collected at 115 River Road. Three indoor air, two outdoor air, two subslab soil gas, and one field duplicate sample were collected at 163 Old River Road. Four indoor air, two outdoor air, three subslab soil gas, and one field duplicate sample were collected at 103 River Road.

The following sampling event information is provided:

- Appendix A—Sampling Location Figures
- Appendix B—Deviations and Sampling Logs
- Appendix C—Building Survey Forms
- Appendix D—Chain-of-Custody Forms

SECTION 3

Sample Results

The Summa canisters were shipped to the analytical laboratory, ALS Environmental (formerly Columbia Analytical Services) in Simi Valley, California, under chain-of-custody procedures (Appendix D). The indoor air, crawl space air, outdoor air, and subslab soil gas samples were analyzed using EPA Methods TO-15 and TO-15 selective ion monitoring mode (SIM). Naphthalene was analyzed in the samples using TO-15 SIM to achieve required reporting limits. ALS is certified for TO-15 analyses by NJDEP (NJ Certification No. CA009).

The project chemist performed a data-quality evaluation and determined that the data-quality objectives were met (Appendix E).

Sampling results are presented in the following appendixes:

- Appendix E—Data Quality Evaluation Reports
- Appendix F—Winter 2015/2016 Analytical results
- Appendix G—Historical analytical results compared to the applicable EPA and NJDEP screening levels
- Appendix H—Figures showing shallow groundwater sampling results within 100 feet of each building

3.1 163 Old River Road

The results from the Winter 2015/2016 VI monitoring event at the 163 Old River Road building confirm previous conclusions, that the VI pathway is not causing indoor air concentrations of site-related constituents to exceed EPA's guidelines for exposure to indoor air. The following observations were made from the December 2015 sampling data:

- Indoor air sampling results were below the NJDEP Rapid Action Levels (RALs) (Appendix F-1 [B]).
- Indoor air sampling results were below or within the EPA commercial indoor air screening levels (IASLs) based on a target cancer risk range of 10^{-6} to 10^{-4} (EPA, 1991), below the EPA commercial IASLs based on a HQ=1, and below the NJDEP non-residential IASLs (Appendix F-1 [C-1 and C-2]).
- Subslab soil gas sampling results were below or within the EPA commercial soil gas screening levels (SGSLs) based on a target cancer risk range of 10^{-6} to 10^{-4} (EPA, 1991) below the EPA commercial SGSLs based on a HQ=1, and below the NJDEP non-residential SGSLs (Appendix F-1 [D-1 and D-2]).

3.2 103 River Road

The results from the Winter 2015/2016 VI monitoring event at the 103 River Road building confirm previous conclusions, that the VI pathway is not causing indoor air concentrations of site-related constituents to exceed EPA's guidelines for exposure to indoor air. The following observations were made from the December 2015 sampling data:

- Indoor air sampling results were below the NJDEP RALs (Appendix F-2 [B]).
- Indoor air sampling results were below or within the EPA commercial IASLs based on a target cancer risk range of 10^{-6} to 10^{-4} (EPA, 1991), below the EPA commercial IASLs based on a HQ=1, and below the NJDEP non-residential IASLs (Appendix F-2 [C-1 and C-2]).
- Subslab soil gas sampling results were below or within the EPA commercial SGSLs based on a target cancer risk range of 10^{-6} to 10^{-4} (EPA, 1991), below the EPA commercial SGSLs based on a HQ=1, and below the NJDEP non-residential SGSLs (Appendix F-2 [D-1 and D-2]).

3.3 115 River Road

The results of the Winter 2015/2016 VI monitoring event in the 115 River Road tenant spaces (Buildings 2 through 11) confirm previous conclusions that the VI pathway is not causing indoor air concentrations of site-related constituents to exceed EPA's regulatory guidelines for exposure to indoor air in the occupied spaces of the building under current site conditions. The following observations were made from the December 2015 sampling data:

- Indoor air sampling results were below the NJDEP RALs (Appendix F-3 [B]).
- Indoor air sampling results from within occupied tenant spaces and the unoccupied basements were below or within the EPA commercial IASLs based on a target cancer risk range of 10^{-6} to 10^{-4} (EPA, 1991), and below the EPA commercial IASLs based on a HQ=1 (Appendix F-3 [C-1]).
- Indoor air sampling results from within occupied tenant spaces were below the NJDEP non-residential IASLs with the exception of several samples within Buildings 3, 4, and 8 which are likely not related to VI (Appendix F-3 [C-2]).
    - The measured concentration of naphthalene in one indoor air sample from an occupied tenant space (Q1-IA-43; Building 8 third floor) is not likely related to VI based on a comparison to results collected from lower levels of the building. The indoor air sample collected from the second floor of Building 8 had lower measured naphthalene concentrations. Additionally, the ratios of detected VOCs differed between the Building 8 third floor sample and Building 7/8 basement samples; higher concentrations of xylenes and trimethylbenzenes were detected on the third floor indicating there may be an indoor VOC source in the third floor tenant space.
    - The measured VOC concentrations in Buildings 3 and 4 were higher than those measured in the crawl spaces below indicating that indoor air concentrations are likely related to indoor VOC sources and not VI.
- As with past events, measured concentrations of benzene and naphthalene exceeded NJDEP non-residential IASLs in the unoccupied Building 7/8 basement (Appendix F-3[D]). These concentrations did not exceed the NJDEP RALs and were within or below the EPA commercial IASLs based on a target cancer risk range of 10^{-6} to 10^{-4} (EPA, 1991), and below the EPA commercial IASLs based on a HQ=1. This space continues to be unnocupyable due to the ventilation system duct work and is infrequently accessed by building maintenance staff, which limits the potential for exposure. The ventilation system continues to operate to control VOCs in the basement.
- The indoor air samples in the occupied buildings remained comparable with past sampling results (since sampling commenced in 2006), about which EPA stated: "vapor intrusion studies conducted during the RI conclude that ongoing monitoring and temporary measures have been sufficient to ensure that vapor intrusion does not currently pose an unacceptable human health risk..." (ROD, pp. 38, 39). Refer to Appendix G for historical results.
- Crawl space air sampling results were below or within the EPA commercial IASLs based on a target cancer risk range of 10^{-6} to 10^{-4} (EPA, 1991), below the EPA commercial IASLs based on a HQ=1, and below the NJDEP non-residential IASLs (Appendix F-3 [D-1 and D-2]).

SECTION 4

Conclusions

Results of the winter 2015/2016 VI monitoring events at the occupied tenant spaces of the 115 River Road building, the 163 Old River building, and the 103 River Road building remain consistent with prior monitoring events and indicate that the VI pathway has not caused indoor air concentrations to exceed EPA's guidelines for exposure to indoor air. Therefore, no further action is needed at this time.

In accordance with the ROD and consent order, performance of ongoing VI monitoring is planned for the Quanta Resources Corporation Superfund Site at 115 River Road and other affected properties as part of the interim remedy and will occur until the remedial action commences. If the remedial action has not been started, sampling will be performed according to the agency-approved work plan (CH2M, 2014, 2015). If the remedial action has commenced, a modified work plan will be prepared and a letter will be presented to the agencies requesting approval for sampling dates in fall of 2016 and detailing any changes from the previously approved work plan (if necessary).

SECTION 5

References

CH2M. 2013. *Quality Assurance Project Plan for 2013/2014 Vapor Intrusion Sampling, Quanta Resources Corporation Superfund Site, Operable Unit 1, Edgewater, New Jersey*. September.

CH2M. 2014. *Work Plan for Winter 2014/2015 Vapor Intrusion Monitoring Events at 115 River Road, 163 Old River Road, and 103 River Road*. December.

CH2M. 2015. *Quanta Resources Corporation Superfund Site, Addendum to Operable Unit 1 (OU1) Vapor Intrusion—Work Plan for the Winter 2014/2015 Monitoring Events at 115 River Road, 163 Old River Road, and 103 River Road.* January 27.

EPA. 1991. *Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions*. OSWER Directive 9355.0-30. April.

EPA. 2015. OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air, June 2015.

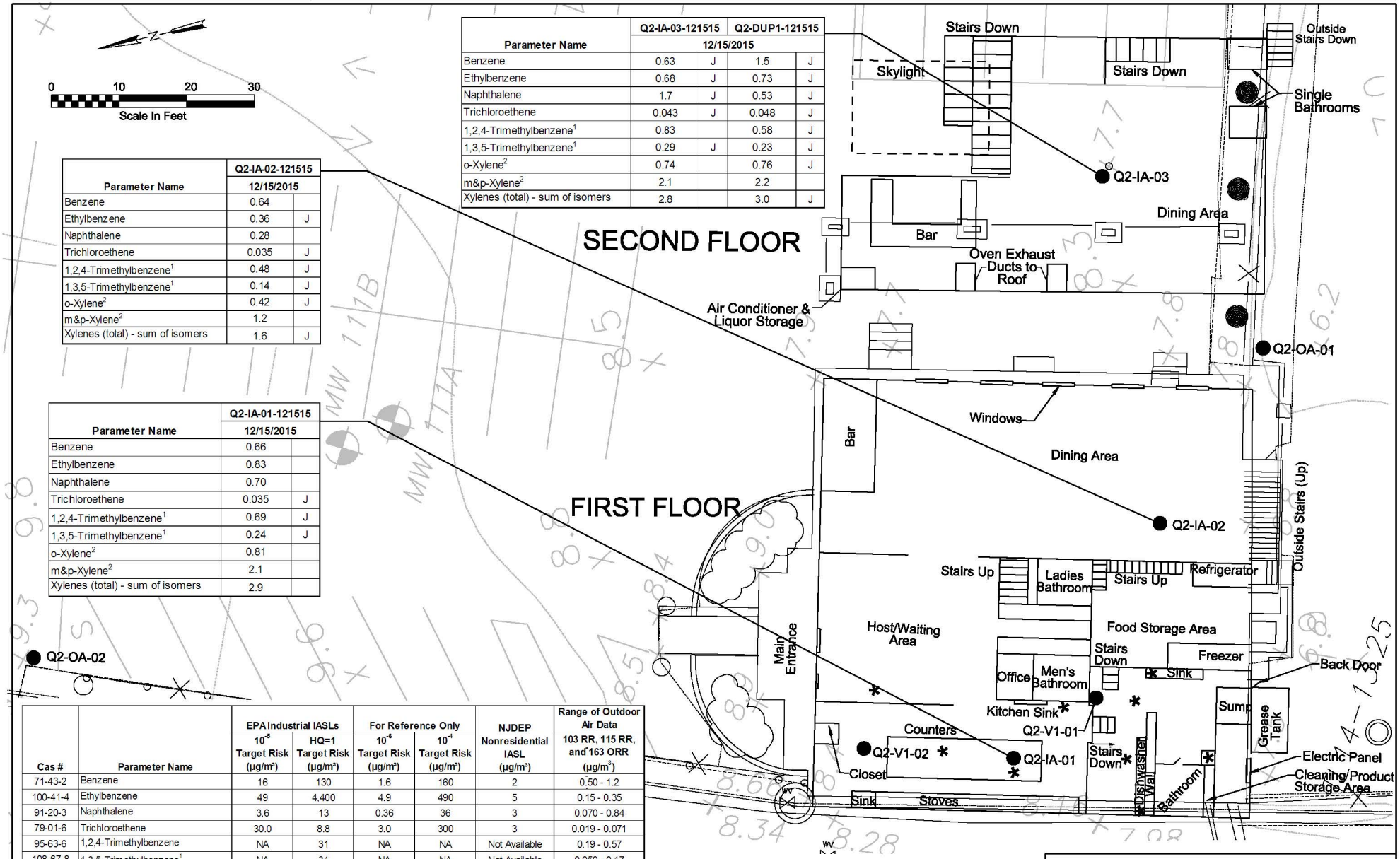
EPA Office of Superfund Remediation and Technology Innovation. 2015. Vapor Intrusion Screening Level Calculator Tool, version 3.4, November 2015, using the November 2015 Regional Screening Levels.

Interstate Technology and Regulatory Council. 2007. *Vapor Intrusion Pathway: A Practical Guideline*. 2007.

NJDEP. 2013. Vapor Intrusion Technical Guidance and the associated NJDEP Vapor Intrusion Screening Level Tables. March.

NJDEP N.J.A.C. 7:26E. Technical Requirements for Site Remediation. May 2012.

Appendix A
Sampling Location Figures



Parameter Name	Q2-IA-03-121515		Q2-DUP1-121515	
	12/15/2015			
Benzene	0.63	J	1.5	J
Ethylbenzene	0.68	J	0.73	J
Naphthalene	1.7	J	0.53	J
Trichloroethene	0.043	J	0.048	J
1,2,4-Trimethylbenzene[1]	0.83		0.58	J
1,3,5-Trimethylbenzene[1]	0.29	J	0.23	J
o-Xylene[2]	0.74		0.76	J
m&p-Xylene[2]	2.1		2.2	
Xylenes (total) - sum of isomers	2.8		3.0	J

Parameter Name	Q2-IA-02-121515	
	12/15/2015	
Benzene	0.64	
Ethylbenzene	0.36	J
Naphthalene	0.28	
Trichloroethene	0.035	J
1,2,4-Trimethylbenzene[1]	0.48	J
1,3,5-Trimethylbenzene[1]	0.14	J
o-Xylene[2]	0.42	J
m&p-Xylene[2]	1.2	
Xylenes (total) - sum of isomers	1.6	J

Parameter Name	Q2-IA-01-121515	
	12/15/2015	
Benzene	0.66	
Ethylbenzene	0.83	
Naphthalene	0.70	
Trichloroethene	0.035	J
1,2,4-Trimethylbenzene[1]	0.69	J
1,3,5-Trimethylbenzene[1]	0.24	J
o-Xylene[2]	0.81	
m&p-Xylene[2]	2.1	
Xylenes (total) - sum of isomers	2.9	

Cas #	Parameter Name	EPA Industrial IASLs 10^{-5} Target Risk (µg/m³)	EPA Industrial IASLs HQ=1 Target Risk (µg/m³)	For Reference Only 10^{-6} Target Risk (µg/m³)	For Reference Only 10^{-4} Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR (µg/m³)
71-43-2	Benzene	16	130	1.6	160	2	0.50 - 1.2
100-41-4	Ethylbenzene	49	4,400	4.9	490	5	0.15 - 0.35
91-20-3	Naphthalene	3.6	13	0.36	36	3	0.070 - 0.84
79-01-6	Trichloroethene	30.0	8.8	3.0	300	3	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	NA	31	NA	NA	Not Available	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	NA	31	NA	NA	Not Available	0.059 - 0.17
108-38-3	o-Xylene	NA	440	NA	NA	Not Available	0.16 - 0.45
NA	m&p-Xylene[2]	Not Available				Not Available	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	NA	440	NA	NA	440	0.59 - 1.7

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to one or more of the IASLs.

D= The reported result is from a dilution.

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

LEGEND

● Q2-IA-01 Indoor Air Sample Locations

NOTES

* Floor Drains

Sample locations are approximate.

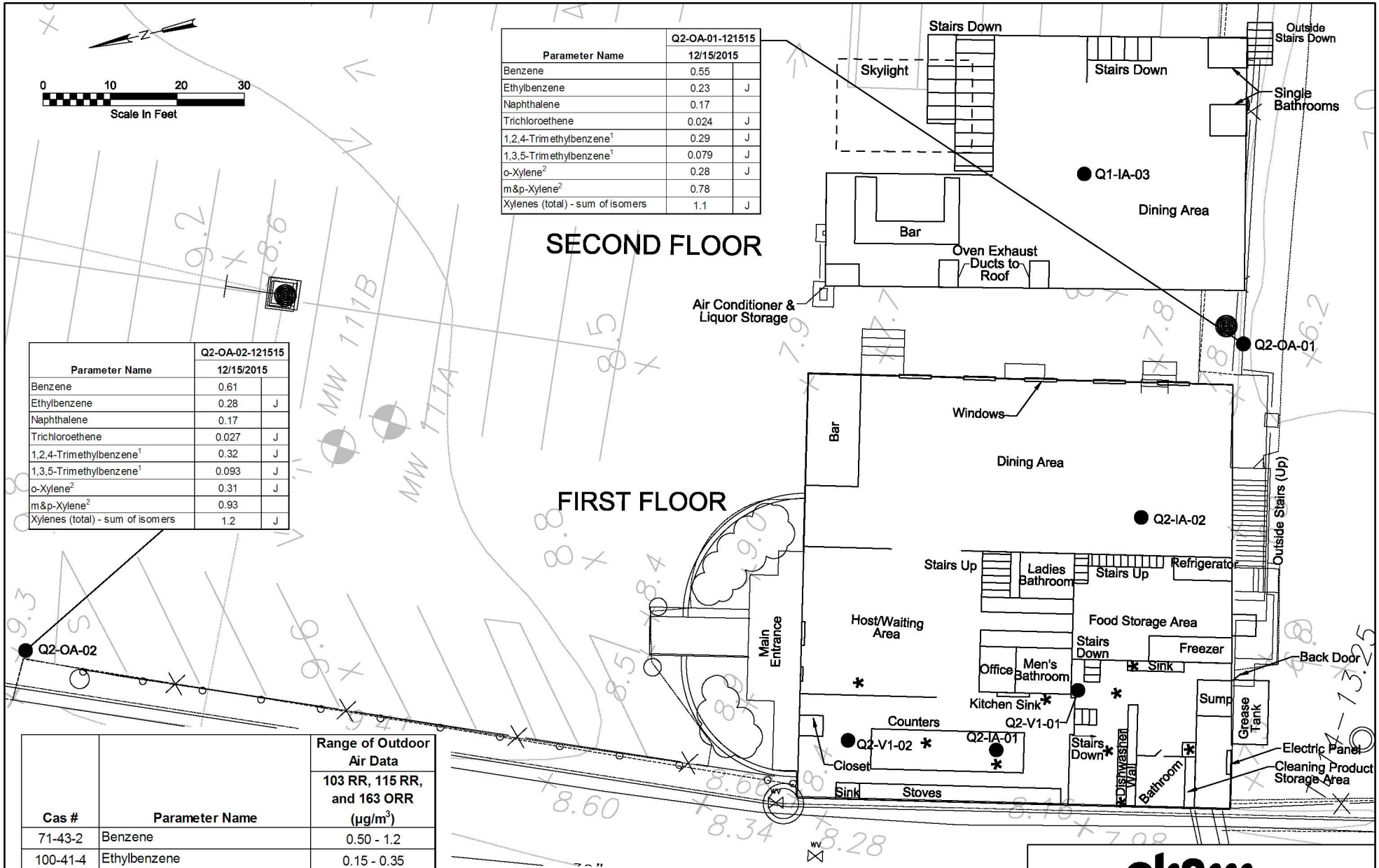
ch2m:

163 Old River Road Building
Vapor Intrusion Monitoring Event
Indoor Air Sample Locations

Quanta Resources Superfund Site
163 Old River Road Building
Edgewater, New Jersey

December 2015 | Figure 1

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_163_RR_Indoor_Air.dgn



Parameter Name	Q2-OA-01-121515 12/15/2015	
Benzene	0.55	
Ethylbenzene	0.23	J
Naphthalene	0.17	
Trichloroethene	0.024	J
1,2,4-Trimethylbenzene[1]	0.29	J
1,3,5-Trimethylbenzene[1]	0.079	J
o-Xylene[2]	0.28	J
m&p-Xylene[2]	0.78	
Xylenes (total) - sum of isomers	1.1	J

Parameter Name	Q2-OA-02-121515 12/15/2015	
Benzene	0.61	
Ethylbenzene	0.28	J
Naphthalene	0.17	
Trichloroethene	0.027	J
1,2,4-Trimethylbenzene[1]	0.32	J
1,3,5-Trimethylbenzene[1]	0.093	J
o-Xylene[2]	0.31	J
m&p-Xylene[2]	0.93	
Xylenes (total) - sum of isomers	1.2	J

Cas #	Parameter Name	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR ($\mu g/m^3$)
71-43-2	Benzene	0.50 - 1.2
100-41-4	Ethylbenzene	0.15 - 0.35
91-20-3	Naphthalene	0.070 - 0.84
79-01-6	Trichloroethene	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	0.059 - 0.17
108-38-3	o-Xylene	0.16 - 0.45
NA	m&p-Xylene[2]	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	0.59 - 1.7

LEGEND

● Q2-OA-01 Outdoor Air Sample Locations

NOTES

* Floor Drains

Sample locations are approximate.

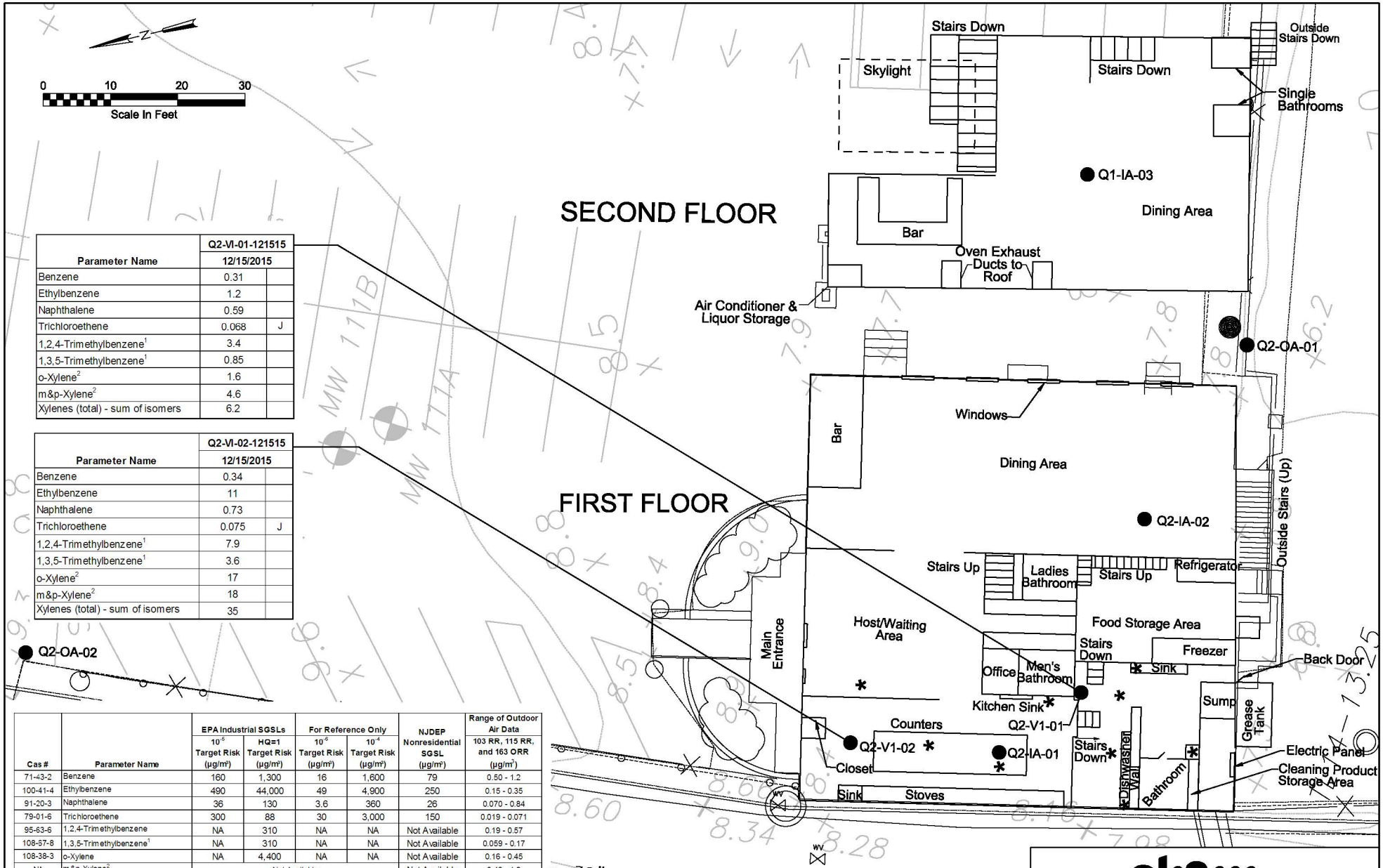
ch2m:

163 Old River Road Building
Vapor Intrusion Monitoring Event
Outdoor Air Sample Locations

Quanta Resources Superfund Site
163 Old River Road Building
Edgewater, New Jersey

December 2015 | Figure 2

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_163_RR_Outdoor_Air.dgn



Parameter Name	Q2-VI-01-121515 12/15/2015	
Benzene	0.31	
Ethylbenzene	1.2	
Naphthalene	0.59	
Trichloroethene	0.068	J
1,2,4-Trimethylbenzene[1]	3.4	
1,3,5-Trimethylbenzene[1]	0.85	
o-Xylene[2]	1.6	
m&p-Xylene[2]	4.6	
Xylenes (total) - sum of isomers	6.2	

Parameter Name	Q2-VI-02-121515 12/15/2015	
Benzene	0.34	
Ethylbenzene	11	
Naphthalene	0.73	
Trichloroethene	0.075	J
1,2,4-Trimethylbenzene[1]	7.9	
1,3,5-Trimethylbenzene[1]	3.6	
o-Xylene[2]	17	
m&p-Xylene[2]	18	
Xylenes (total) - sum of isomers	35	

Cas #	Parameter Name	EPA Industrial SGSLs 10^{-5} Target Risk ($\mu g/m^3$)	EPA Industrial SGSLs HQ=1 Target Risk ($\mu g/m^3$)	For Reference Only 10^{-6} Target Risk ($\mu g/m^3$)	For Reference Only 10^{-4} Target Risk ($\mu g/m^3$)	NJDEP Nonresidential SGSL ($\mu g/m^3$)	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR ($\mu g/m^3$)
71-43-2	Benzene	160	1,300	16	1,600	79	0.50 - 1.2
100-41-4	Ethylbenzene	490	44,000	49	4,900	250	0.15 - 0.35
91-20-3	Naphthalene	36	130	3.6	360	26	0.070 - 0.84
79-01-6	Trichloroethene	300	88	30	3,000	150	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	NA	310	NA	NA	Not Available	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	NA	310	NA	NA	Not Available	0.059 - 0.17
108-38-3	o-Xylene	NA	4,400	NA	NA	Not Available	0.16 - 0.45
NA	m&p-Xylene[2]	Not Available				Not Available	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	NA	4,400	NA	NA	22,000	0.59 - 1.7

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to one or more of the IASLs.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a]= The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

LEGEND

● Q2-V1-02 Subslab Sample Locations

NOTES

* Floor Drains

Sample locations are approximate.

ch2m:

163 Old River Road Building
Vapor Intrusion Monitoring Event
Subslab Air Sample Locations

Quanta Resources Superfund Site
163 Old River Road Building
Edgewater, New Jersey

December 2015 | Figure 3

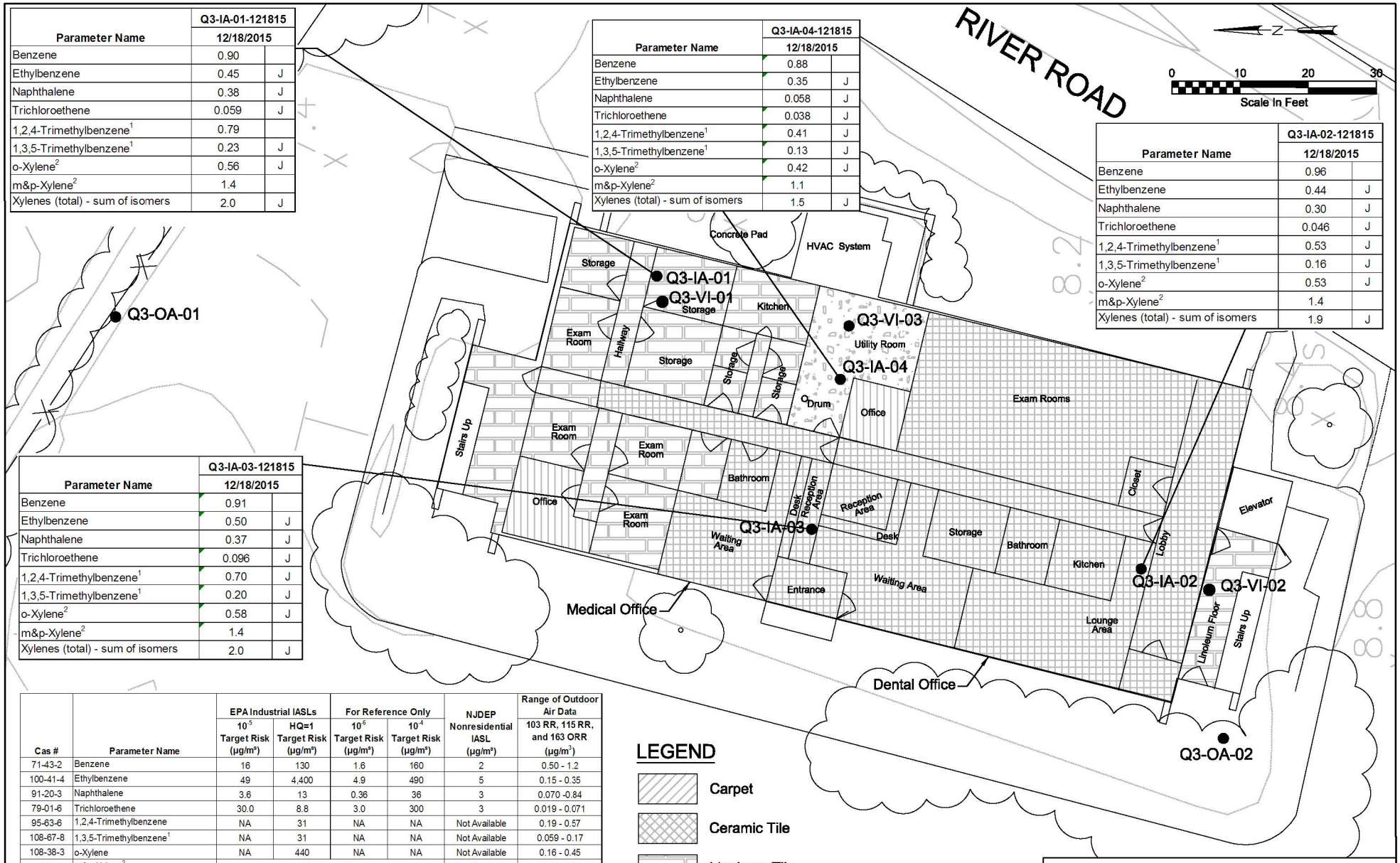
CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_163_RR_Subslab.dgn

Parameter Name	Q3-IA-01-121815 12/18/2015	
Benzene	0.90	
Ethylbenzene	0.45	J
Naphthalene	0.38	J
Trichloroethene	0.059	J
1,2,4-Trimethylbenzene[1]	0.79	
1,3,5-Trimethylbenzene[1]	0.23	J
o-Xylene[2]	0.56	J
m&p-Xylene[2]	1.4	
Xylenes (total) - sum of isomers	2.0	J

Parameter Name	Q3-IA-04-121815 12/18/2015	
Benzene	0.88	
Ethylbenzene	0.35	J
Naphthalene	0.058	J
Trichloroethene	0.038	J
1,2,4-Trimethylbenzene[1]	0.41	J
1,3,5-Trimethylbenzene[1]	0.13	J
o-Xylene[2]	0.42	J
m&p-Xylene[2]	1.1	
Xylenes (total) - sum of isomers	1.5	J

Parameter Name	Q3-IA-02-121815 12/18/2015	
Benzene	0.96	
Ethylbenzene	0.44	J
Naphthalene	0.30	J
Trichloroethene	0.046	J
1,2,4-Trimethylbenzene[1]	0.53	J
1,3,5-Trimethylbenzene[1]	0.16	J
o-Xylene[2]	0.53	J
m&p-Xylene[2]	1.4	
Xylenes (total) - sum of isomers	1.9	J

Parameter Name	Q3-IA-03-121815 12/18/2015	
Benzene	0.91	
Ethylbenzene	0.50	J
Naphthalene	0.37	J
Trichloroethene	0.096	J
1,2,4-Trimethylbenzene[1]	0.70	J
1,3,5-Trimethylbenzene[1]	0.20	J
o-Xylene[2]	0.58	J
m&p-Xylene[2]	1.4	
Xylenes (total) - sum of isomers	2.0	J



Cas #	Parameter Name	EPA Industrial IASLs 10^{-5} Target Risk (µg/m³)	EPA Industrial IASLs HQ=1 Target Risk (µg/m³)	For Reference Only 10^{-6} Target Risk (µg/m³)	For Reference Only 10^{-4} Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR (µg/m³)
71-43-2	Benzene	16	130	1.6	160	2	0.50 - 1.2
100-41-4	Ethylbenzene	49	4,400	4.9	490	5	0.15 - 0.35
91-20-3	Naphthalene	3.6	13	0.36	36	3	0.070 -0.84
79-01-6	Trichloroethene	30.0	8.8	3.0	300	3	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	NA	31	NA	NA	Not Available	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	NA	31	NA	NA	Not Available	0.059 - 0.17
108-38-3	o-Xylene	NA	440	NA	NA	Not Available	0.16 - 0.45
NA	m&p-Xylene[2]	Not Available				Not Available	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	NA	440	NA	NA	440	0.59 - 1.7

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to one or more of the IASLs.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[3] = The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

LEGEND

- Carpet
- Ceramic Tile
- Linoleum Tile
- Bare Concrete

NOTES

Sample locations are approximate.

Medical office room locations are close to scale.
Dental office room locations are approximate.

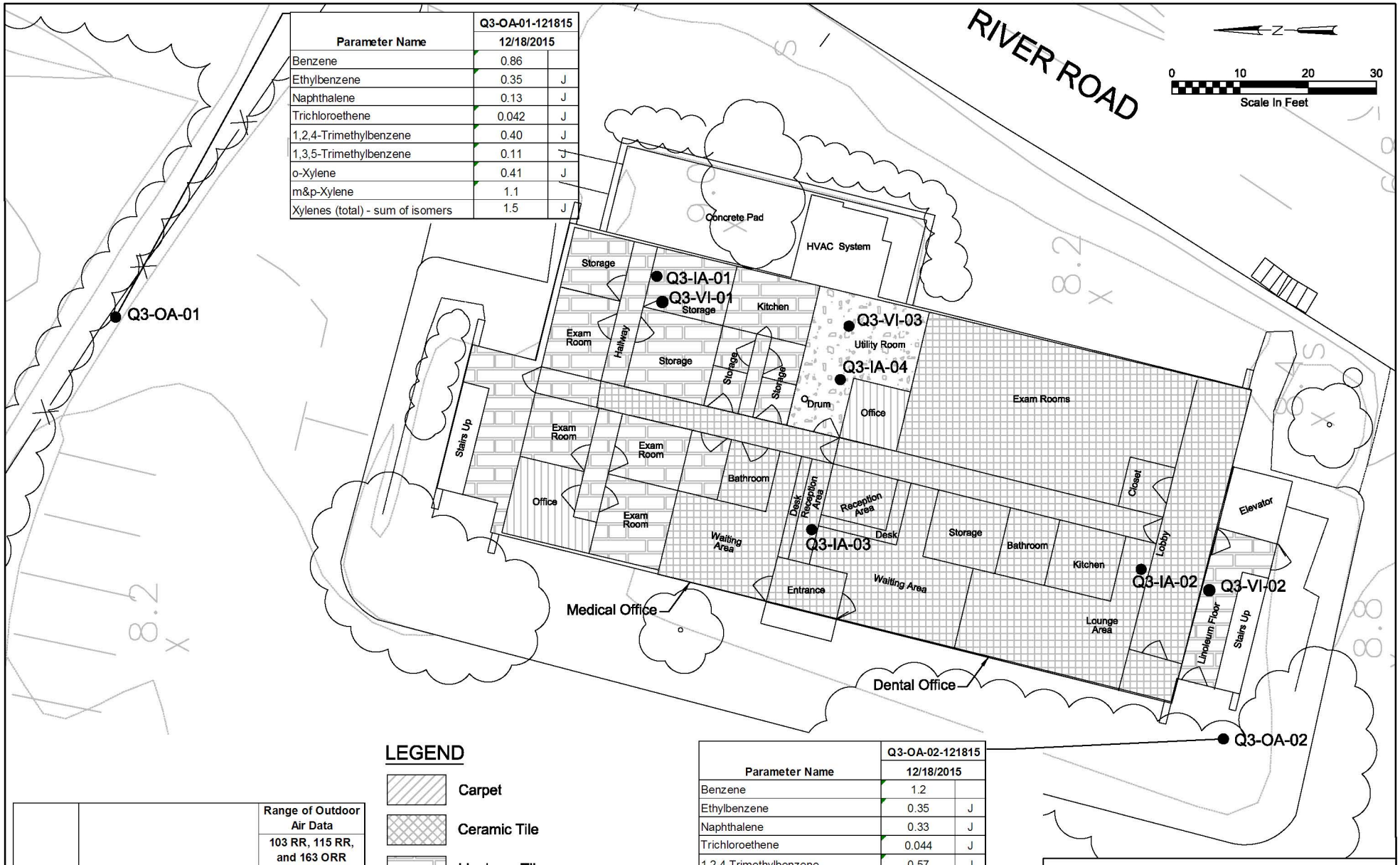
ch2m:

103 River Road Building
Vapor Intrusion Monitoring Event
Indoor Air Sample Locations

Quanta Resources Site
103 Old River Road Building
Edgewater, New Jersey

December 2015 | Figure 4

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_103_RR_INDOOR_AIR.DGN



Parameter Name	Q3-OA-01-121815 12/18/2015	
Benzene	0.86	
Ethylbenzene	0.35	J
Naphthalene	0.13	J
Trichloroethene	0.042	J
1,2,4-Trimethylbenzene	0.40	J
1,3,5-Trimethylbenzene	0.11	J
o-Xylene	0.41	J
m&p-Xylene	1.1	
Xylenes (total) - sum of isomers	1.5	J

Parameter Name	Q3-OA-02-121815 12/18/2015	
Benzene	1.2	
Ethylbenzene	0.35	J
Naphthalene	0.33	J
Trichloroethene	0.044	J
1,2,4-Trimethylbenzene	0.57	J
1,3,5-Trimethylbenzene	0.17	J
o-Xylene	0.45	J
m&p-Xylene	1.2	
Xylenes (total) - sum of isomers	1.7	J

LEGEND

- Carpet
- Ceramic Tile
- Linoleum Tile
- Bare Concrete

NOTES

Sample locations are approximate.

Medical office room locations are close to scale.
Dental office room locations are approximate.

Cas #	Parameter Name	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR ($\mu g/m^3$)
71-43-2	Benzene	0.50 - 1.2
100-41-4	Ethylbenzene	0.15 - 0.35
91-20-3	Naphthalene	0.070 -0.84
79-01-6	Trichloroethene	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	0.059 - 0.17
108-38-3	o-Xylene	0.16 - 0.45
NA	m&p-Xylene[2]	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	0.59 - 1.7

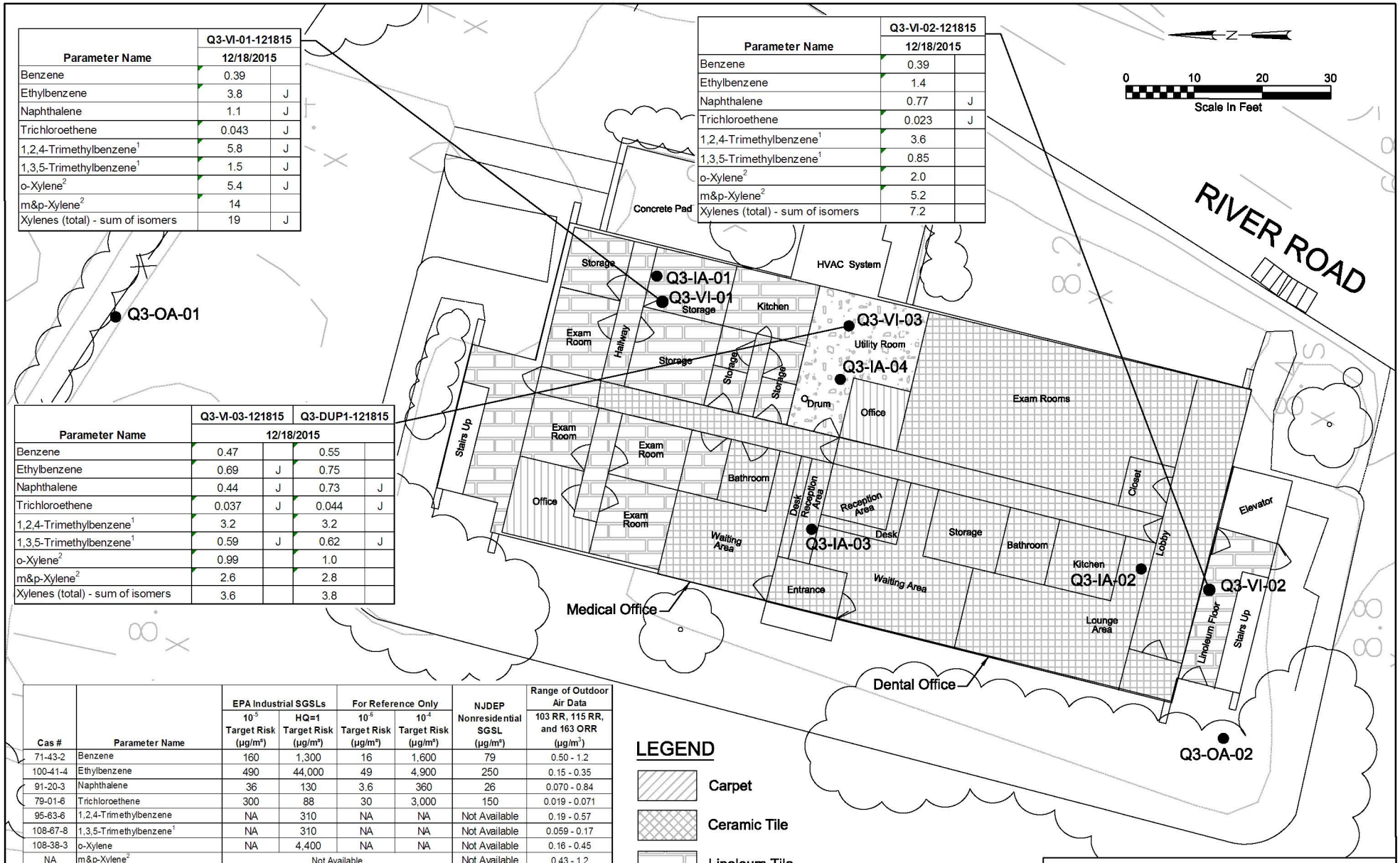
ch2m:

103 River Road Building
Vapor Intrusion Monitoring Event
Outdoor Air Sample Locations

Quanta Resources Site
103 Old River Road Building
Edgewater, New Jersey

December 2015 | Figure 5

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_103_RR_Outdoor_Air.dgn



Cas #	Parameter Name	EPA Industrial SGSLs 10^{-5} Target Risk (µg/m³)	EPA Industrial SGSLs HQ=1 Target Risk (µg/m³)	For Reference Only 10^{-6} Target Risk (µg/m³)	For Reference Only 10^{-4} Target Risk (µg/m³)	NJDEP Nonresidential SGSL (µg/m³)	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR (µg/m³)
71-43-2	Benzene	160	1,300	16	1,600	79	0.50 - 1.2
100-41-4	Ethylbenzene	490	44,000	49	4,900	250	0.15 - 0.35
91-20-3	Naphthalene	36	130	3.6	360	26	0.070 - 0.84
79-01-6	Trichloroethene	300	88	30	3,000	150	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	NA	310	NA	NA	Not Available	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	NA	310	NA	NA	Not Available	0.059 - 0.17
108-38-3	o-Xylene	NA	4,400	NA	NA	Not Available	0.16 - 0.45
NA	m&p-Xylene[2]	Not Available				Not Available	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	NA	4,400	NA	NA	22,000	0.59 - 1.7

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to one or more of the IASLs.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a]= The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

LEGEND

- Carpet
- Ceramic Tile
- Linoleum Tile
- Bare Concrete

NOTES

Sample locations are approximate.

Medical office room locations are close to scale.
Dental office room locations are approximate.

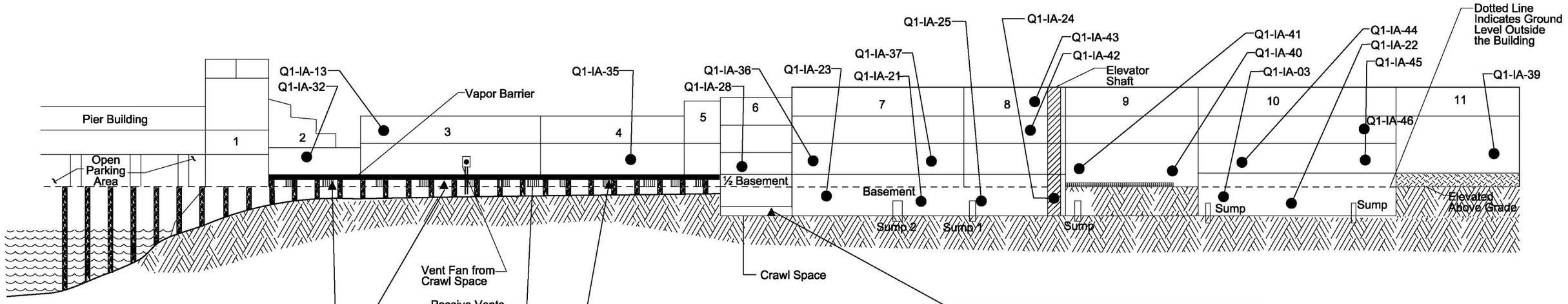
ch2m:

103 River Road Building
Vapor Intrusion Monitoring Event
Subslab Air Sample Locations

Quanta Resources Site
103 Old River Road Building
Edgewater, New Jersey

December 2015 | Figure 6

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_103_RR_Subslab.dgn



Parameter Name	Q1-CS-07-121715 12/17/2015	
Benzene	0.80	
Ethylbenzene	0.35	J
Naphthalene	0.22	
Trichloroethene	0.041	J
1,2,4-Trimethylbenzene	0.45	J
1,3,5-Trimethylbenzene[1]	0.13	J
o-Xylene	0.44	J
m&p-Xylene[2]	1.2	
Xylenes (total) - sum of isomers	1.6	J

Parameter Name	Q1-CS-05-121715 12/17/2015	
Benzene	1.9	
Ethylbenzene	0.34	J
Naphthalene	0.55	
Trichloroethene	0.035	J
1,2,4-Trimethylbenzene	0.38	J
1,3,5-Trimethylbenzene[1]	0.12	J
o-Xylene	0.43	J
m&p-Xylene[2]	1.1	
Xylenes (total) - sum of isomers	1.5	J

Parameter Name	Q1-CS-04-121715 12/17/2015	
Benzene	0.85	
Ethylbenzene	0.37	J
Naphthalene	1.1	
Trichloroethene	0.053	J
1,2,4-Trimethylbenzene	0.49	J
1,3,5-Trimethylbenzene[1]	0.14	J
o-Xylene	0.48	J
m&p-Xylene[2]	1.1	
Xylenes (total) - sum of isomers	1.6	J

Parameter Name	Q1-CS-01-121715 12/17/2015		Q1-DUP2-121715 12/17/2015	
Benzene	1.1		1.1	
Ethylbenzene	0.95		0.79	
Naphthalene	0.43	J	0.15	J
Trichloroethene	0.61		0.61	
1,2,4-Trimethylbenzene	1.0		0.67	J
1,3,5-Trimethylbenzene[1]	0.33	J	0.23	J
o-Xylene	1.1		0.90	
m&p-Xylene[2]	3.2		2.5	
Xylenes (total) - sum of isomers	4.3		3.4	

Cas #	Parameter Name	EPA Industrial IASLs 10^{-5} Target Risk (µg/m³)	EPA Industrial IASLs HQ=1 Target Risk (µg/m³)	For Reference Only 10^{-6} Target Risk (µg/m³)	For Reference Only 10^{-4} Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR (µg/m³)
71-43-2	Benzene	16	130	1.6	160	2	0.50 - 1.2
100-41-4	Ethylbenzene	49	4,400	4.9	490	5	0.15 - 0.35
91-20-3	Naphthalene	3.6	13	0.36	36	3	0.070 -0.84
79-01-6	Trichloroethene	30.0	8.8	3.0	300	3	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	NA	31	NA	NA	Not Available	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	NA	31	NA	NA	Not Available	0.059 - 0.17
108-38-3	o-Xylene	NA	440	NA	NA	Not Available	0.16 - 0.45
NA	m&p-Xylene[2]	Not Available				Not Available	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	NA	440	NA	NA	440	0.59 - 1.7

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to one or more of the IASLs.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a]= The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

LEGEND

● Q1-IA-07 Indoor Air Sample Locations

▲ Q1-CS-07 Crawl Space Air Sample Locations

NOTES

Building lengths approximately to scale. Other building features not to scale.

Sample locations are approximate.

0 25 50 75

Scale In Feet

ch2m:

115 River Road Building
Vapor Intrusion Monitoring Event
Crawl Space Air Sample Locations

Quanta Resources Superfund Site
115 River Road Building
Edgewater, New Jersey

December 2015 | Figure 7

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_115_RR_Crawl_Space.dgn

Parameter Name	Q1-IA-13-121715		Q1-DUP3-121715	
	12/17/2015			
Benzene	**2.0**		**2.0**	
Ethylbenzene	1.8		1.7	
Naphthalene	1.2		1.2	
Trichloroethene	0.084	J	0.061	J
1,2,4-Trimethylbenzene	1.8		2.0	
1,3,5-Trimethylbenzene[1]	0.51	J	0.57	J
o-Xylene	2.0		2.0	
m&p-Xylene[2]	5.9		5.8	
Xylenes (total) - sum of isomers	7.9		7.8	

Parameter Name	Q1-IA-32-121715	
	12/17/2015	
Benzene	1.1	
Ethylbenzene	0.81	
Naphthalene	1.1	
Trichloroethene	0.057	J
1,2,4-Trimethylbenzene	0.98	
1,3,5-Trimethylbenzene[1]	0.28	J
o-Xylene	0.97	
m&p-Xylene[2]	2.6	
Xylenes (total) - sum of isomers	3.6	

Parameter Name	Q1-IA-28-121715	
	12/17/2015	
Benzene	1.0	
Ethylbenzene	0.68	J
Naphthalene	0.26	
Trichloroethene	0.095	J
1,2,4-Trimethylbenzene	0.64	J
1,3,5-Trimethylbenzene[1]	0.19	J
o-Xylene	0.76	
m&p-Xylene[2]	2.2	
Xylenes (total) - sum of isomers	3.0	

Parameter Name	Q1-IA-35-121715	
	12/17/2015	
Benzene	**2.2**	
Ethylbenzene	0.85	
Naphthalene	1.2	
Trichloroethene	0.066	J
1,2,4-Trimethylbenzene	1.2	
1,3,5-Trimethylbenzene[1]	0.32	J
o-Xylene	1.0	
m&p-Xylene[2]	2.7	
Xylenes (total) - sum of isomers	3.7	

Parameter Name	Q1-IA-37-121615	
	12/16/2015	
Benzene	0.57	
Ethylbenzene	0.25	J
Naphthalene	0.31	
Trichloroethene	0.028	J
1,2,4-Trimethylbenzene	0.39	J
1,3,5-Trimethylbenzene[1]	0.12	J
o-Xylene	0.33	J
m&p-Xylene[2]	0.80	
Xylenes (total) - sum of isomers	1.1	J

Parameter Name	Q1-IA-36-121715	
	12/17/2015	
Benzene	0.93	
Ethylbenzene	0.47	J
Naphthalene	0.65	
Trichloroethene	0.057	J
1,2,4-Trimethylbenzene	0.65	J
1,3,5-Trimethylbenzene[1]	0.21	J
o-Xylene	0.57	J
m&p-Xylene[2]	1.5	
Xylenes (total) - sum of isomers	2.1	J

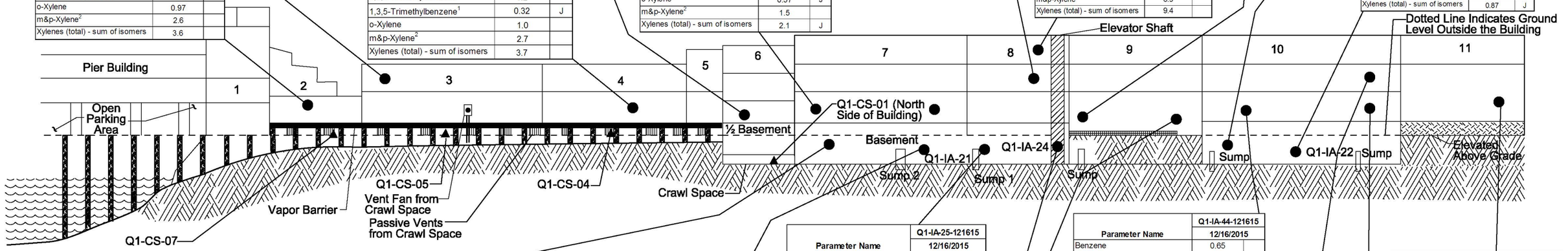
Parameter Name	Q1-IA-42-121615	
	12/16/2015	
Benzene	0.64	
Ethylbenzene	0.65	J
Naphthalene	0.62	
Trichloroethene	0.090	J
1,2,4-Trimethylbenzene	0.59	J
1,3,5-Trimethylbenzene[1]	0.17	J
o-Xylene	0.72	J
m&p-Xylene[2]	2.0	
Xylenes (total) - sum of isomers	2.7	J

Parameter Name	Q1-IA-41-121615	
	12/16/2015	
Benzene	0.51	
Ethylbenzene	0.22	J
Naphthalene	0.16	
Trichloroethene	0.040	J
1,2,4-Trimethylbenzene	0.30	J
1,3,5-Trimethylbenzene[1]	0.085	J
o-Xylene	0.31	J
m&p-Xylene[2]	0.73	
Xylenes (total) - sum of isomers	1.0	J

Parameter Name	Q1-IA-03-121615	
	12/16/2015	
Benzene	0.54	
Ethylbenzene	0.23	J
Naphthalene	0.18	
Trichloroethene	0.035	J
1,2,4-Trimethylbenzene	0.28	J
1,3,5-Trimethylbenzene[1]	0.090	J
o-Xylene	0.27	J
m&p-Xylene[2]	0.62	J
Xylenes (total) - sum of isomers	0.89	J

Parameter Name	Q1-IA-43-121815	
	12/18/2015	
Benzene	0.86	
Ethylbenzene	2.1	
Naphthalene	**3.8**	J
Trichloroethene	0.67	
1,2,4-Trimethylbenzene	6.8	
1,3,5-Trimethylbenzene[1]	2.3	
o-Xylene	2.5	
m&p-Xylene[2]	6.9	
Xylenes (total) - sum of isomers	9.4	

Parameter Name	Q1-IA-22-121615	
	12/16/2015	
Benzene	0.66	
Ethylbenzene	0.20	J
Naphthalene	0.036	
Trichloroethene	0.037	J
1,2,4-Trimethylbenzene	0.20	J
1,3,5-Trimethylbenzene[1]	0.087	J
o-Xylene	0.25	J
m&p-Xylene[2]	0.62	J
Xylenes (total) - sum of isomers	0.87	J



Parameter Name	Q1-IA-23-121615	
	12/16/2015	
Benzene	0.79	
Ethylbenzene	0.72	
Naphthalene	0.37	
Trichloroethene	1.4	
1,2,4-Trimethylbenzene	0.73	
1,3,5-Trimethylbenzene[1]	0.21	J
o-Xylene	0.82	
m&p-Xylene[2]	2.3	
Xylenes (total) - sum of isomers	3.1	

Parameter Name	Q1-IA-21-121615	
	12/16/2015	
Benzene	1.4	
Ethylbenzene	0.79	
Naphthalene	0.66	
Trichloroethene	0.022	J
1,2,4-Trimethylbenzene	0.53	J
1,3,5-Trimethylbenzene[1]	0.17	J
o-Xylene	0.54	J
m&p-Xylene[2]	1.0	
Xylenes (total) - sum of isomers	1.5	J

Parameter Name	Q1-IA-25-121615	
	12/16/2015	
Benzene	1.2	
Ethylbenzene	1.0	
Naphthalene	1.1	
Trichloroethene	0.037	J
1,2,4-Trimethylbenzene	0.70	J
1,3,5-Trimethylbenzene[1]	0.23	J
o-Xylene	0.69	J
m&p-Xylene[2]	1.2	
Xylenes (total) - sum of isomers	1.9	J

Parameter Name	Q1-IA-44-121615	
	12/16/2015	
Benzene	0.65	
Ethylbenzene	0.43	J
Naphthalene	0.098	
Trichloroethene	0.18	
1,2,4-Trimethylbenzene	0.45	J
1,3,5-Trimethylbenzene[1]	0.14	J
o-Xylene	0.50	J
m&p-Xylene[2]	1.4	
Xylenes (total) - sum of isomers	1.9	J

Parameter Name	Q1-IA-39-121615	
	12/16/2015	
Benzene	0.53	
Ethylbenzene	0.34	J
Naphthalene	0.31	
Trichloroethene	0.041	J
1,2,4-Trimethylbenzene	0.47	J
1,3,5-Trimethylbenzene[1]	0.13	J
o-Xylene	0.49	J
m&p-Xylene[2]	1.8	
Xylenes (total) - sum of isomers	2.3	J

Parameter Name	Q1-IA-24-121615		Q1-DUP1-121615	
	12/16/2015			
Benzene	**2.3**		**2.6**	
Ethylbenzene	2.3		2.3	
Naphthalene	**4.0**		**3.2**	
Trichloroethene	0.036	J	0.034	J
1,2,4-Trimethylbenzene	1.3		1.2	
1,3,5-Trimethylbenzene[1]	0.41	J	0.38	J
o-Xylene	1.3		1.3	
m&p-Xylene[2]	1.9		1.9	
Xylenes (total) - sum of isomers	3.2		3.2	

Parameter Name	Q1-IA-40-121615	
	12/16/2015	
Benzene	0.58	
Ethylbenzene	0.23	J
Naphthalene	0.25	
Trichloroethene	0.035	J
1,2,4-Trimethylbenzene	0.32	J
1,3,5-Trimethylbenzene[1]	0.088	J
o-Xylene	0.32	J
m&p-Xylene[2]	0.75	
Xylenes (total) - sum of isomers	1.1	J

Parameter Name	Q1-IA-46-121715	
	12/17/2015	
Benzene	0.97	
Ethylbenzene	0.60	J
Naphthalene	0.91	
Trichloroethene	0.14	J
1,2,4-Trimethylbenzene	0.50	J
1,3,5-Trimethylbenzene[1]	0.15	J
o-Xylene	0.56	J
m&p-Xylene[2]	1.5	
Xylenes (total) - sum of isomers	2.1	J

Parameter Name	Q1-IA-45-121615	
	12/16/2015	
Benzene	0.57	
Ethylbenzene	0.33	J
Naphthalene	0.41	
Trichloroethene	0.099	J
1,2,4-Trimethylbenzene	0.46	J
1,3,5-Trimethylbenzene[1]	0.14	J
o-Xylene	0.45	J
m&p-Xylene[2]	1.2	
Xylenes (total) - sum of isomers	1.7	J

Cas #	Parameter Name	EPA Industrial IASLs 10^{-5} Target Risk (µg/m³)	EPA Industrial IASLs HQ=1 Target Risk (µg/m³)	For Reference Only 10^{-6} Target Risk (µg/m³)	For Reference Only 10^{-4} Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR (µg/m³)
71-43-2	Benzene	16	130	1.6	160	2	0.50 - 1.2
100-41-4	Ethylbenzene	49	4,400	4.9	490	5	0.15 - 0.35
91-20-3	Naphthalene	3.6	13	0.36	36	3	0.070 -0.84
79-01-6	Trichloroethene	30.0	8.8	3.0	300	3	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	NA	31	NA	NA	Not Available	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	NA	31	NA	NA	Not Available	0.059 - 0.17
108-38-3	o-Xylene	NA	440	NA	NA	Not Available	0.16 - 0.45
NA	m&p-Xylene[2]	Not Available				Not Available	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	NA	440	NA	NA	440	0.59 - 1.7

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to one or more of the IASLs.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[9]= The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

LEGEND

● Q1-IA-07 Indoor Air Sample Locations

▲ Q1-CS-07 Crawl Space Air Sample Locations

NOTES

Building lengths approximately to scale.
Other building features not to scale.

Sample locations are approximate.

0 25 50 75
Scale In Feet

ch2m:

115 River Road Building
Vapor Intrusion Monitoring Event
Indoor Air Sample Locations

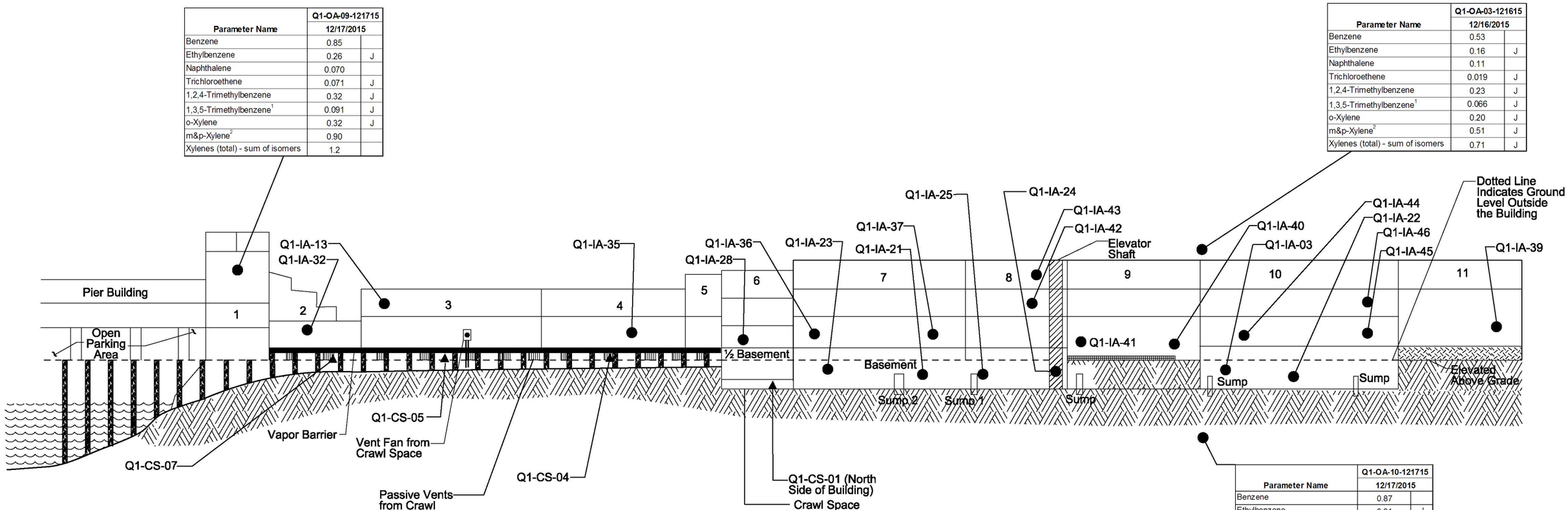
Quanta Resources Superfund Site
115 River Road Building
Edgewater, New Jersey

December 2015 | Figure 8

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_115_RR_Indoor_Air.dgn

Parameter Name	Q1-OA-09-121715 12/17/2015	
Benzene	0.85	
Ethylbenzene	0.26	J
Naphthalene	0.070	
Trichloroethene	0.071	J
1,2,4-Trimethylbenzene	0.32	J
1,3,5-Trimethylbenzene[1]	0.091	J
o-Xylene	0.32	J
m&p-Xylene[2]	0.90	
Xylenes (total) - sum of isomers	1.2	

Parameter Name	Q1-OA-03-121615 12/16/2015	
Benzene	0.53	
Ethylbenzene	0.16	J
Naphthalene	0.11	
Trichloroethene	0.019	J
1,2,4-Trimethylbenzene	0.23	J
1,3,5-Trimethylbenzene[1]	0.066	J
o-Xylene	0.20	J
m&p-Xylene[2]	0.51	J
Xylenes (total) - sum of isomers	0.71	J



Parameter Name	Q1-OA-10-121715 12/17/2015	
Benzene	0.87	
Ethylbenzene	0.31	J
Naphthalene	0.15	
Trichloroethene	0.035	J
1,2,4-Trimethylbenzene	0.34	J
1,3,5-Trimethylbenzene[1]	0.093	J
o-Xylene	0.37	J
m&p-Xylene[2]	0.96	
Xylenes (total) - sum of isomers	1.3	J

Parameter Name	Q1-OA-06-121615 12/16/2015	
Benzene	0.50	
Ethylbenzene	0.15	J
Naphthalene	0.84	
Trichloroethene	0.019	J
1,2,4-Trimethylbenzene	0.19	J
1,3,5-Trimethylbenzene[1]	0.059	J
o-Xylene	0.16	J
m&p-Xylene[2]	0.43	J
Xylenes (total) - sum of isomers	0.59	J

Cas #	Parameter Name	Range of Outdoor Air Data 103 RR, 115 RR, and 163 ORR ($\mu g/m^3$)
71-43-2	Benzene	0.50 - 1.2
100-41-4	Ethylbenzene	0.15 - 0.35
91-20-3	Naphthalene	0.070 -0.84
79-01-6	Trichloroethene	0.019 - 0.071
95-63-6	1,2,4-Trimethylbenzene	0.19 - 0.57
108-67-8	1,3,5-Trimethylbenzene[1]	0.059 - 0.17
108-38-3	o-Xylene	0.16 - 0.45
NA	m&p-Xylene[2]	0.43 - 1.2
1330-20-7	Xylenes (total) - sum of isomers	0.59 - 1.7

0 25 50 75
Scale In Feet

LEGEND

● Q1-OA-09 Outdoor Air Sample Locations

▲ Q1-CS-07 Crawl Space Air Sample Locations

NOTES

Building lengths approximately to scale. Other building features not to scale.

Sample locations are approximate.

ch2m:

115 River Road Building
Vapor Intrusion Monitoring Event
Outdoor Air Sample Locations

Quanta Resources Superfund Site
115 River Road Building
Edgewater, New Jersey

December 2015 | Figure 9

CASTOR | PROJ | HONEYWELLINTERNATINC | 400128VAPORINTRUSION | DMS | DOCUMENTS | VI_115_RR_Outdoor_Air.dgn

Appendix B
Deviations and Sampling Logs

APPENDIX B

Deviations in Sampling Procedures

The following deviations to the proposed sampling plan occurred due to site conditions during the sampling event. Additional details are provided in the sampling logs included in this attachment.

1.1 163 Old River Road

None.

1.2 103 River Road

None.

1.3 115 River Road

The samples were not all collected concurrently due to access issues in the buildings. The indoor air samples at Buildings 7/8, 8, 9, 10, and 11 were collected along with two outdoor air samples December 15–16. The indoor air samples at Buildings 2–7, 10 and the four crawlspace samples were collected with the two remaining outdoor air samples December 16-17. Sampling date and time information is provided in the accompanying logs in this appendix. This deviation will not affect the results or conclusions of the monitoring event because each "building" (e.g., 9, 11) at 115 River Road are separated by dividing walls like a strip mall.

There was an observable trend between the final field and lab measured canister pressures such that the lab measured final canister pressures were approximately 1 to 2 inches Hg higher which is likely due to temperature and elevation differences between the field and the lab. The sample data from these canisters are considered valid because the canisters still had residual vacuum when they reached the laboratory and the laboratory confirmed the canister valves were not leaking.

One of the indoor air samples, Q1-IA-43 in Suite 830 of Building 8, was deployed on December 15, 2015 but the tenant space was inaccessible on December 16, 2015. The sample was successfully re-collected December 17–18 when the tenant space was accessible, and the original canister was not submitted for analysis.

Although the field team instructed building occupants to keep windows and doors closed as much as possible during the sampling period, windows in one tenant space, Suite 824 on the second floor of Building 8, were open when the sample (Q1-IA-42-121615) was collected. However, when the canister was deployed and during the 20-hour check, the windows and door to the suite were closed. Therefore, it is likely that the windows were closed for the majority of the sample collection.

One of the indoor air sample canisters, Q1-IA-36 in Suite 701 of Building 7, was deployed December 15, 2015, but the flow controller malfunctioned. The sample was successfully re-collected December 16–17.

One of the crawl space air sample canisters, Q1-CS-05 in Building 3 had to be moved from the location where it was collected the past several years back to its original location. The sample had been collected through a hole in the tile floor that extends into the underlying crawl space the past several years but, this hole was no longer present, as new tile had been installed in its place. The sample was instead collected on the south side of the building through a vent leading to the crawl space, where it had been originally collected. This deviation will not affect the results or conclusions of the monitoring event because the sample was collected from the same crawl space area, just through a different access point.

The crawl space air samples that were collected through vents on the south side of the building were collected approximately 2 hours early because of heavy rain. The samples were collected by inserting tubing through the vents and then taping paper to the side of the building to cover the vents and the tape and paper came off in the rain. This deviation will not affect the results or conclusions of the monitoring event because the sample canisters had reached a sufficient final pressure to achieve laboratory reporting limits below the screening levels.

Table 1a. Sample Locations—Winter 2015/2016 Vapor Intrusion Monitoring Event
163 Old River Road Building
Quanta Site, Edgewater, New Jersey

Indoor Air Sample Locations

Location ID	Sample Location Description
Q2-IA-01	Kitchen—counter top
Q2-IA-02	1st floor dining room—on table near wall
Q2-IA-03	2nd floor dining room—on table in SW room

Subslab Sample Locations

Location ID	Sample Location Description
Q2-VI-01	Storage room next to stairs
Q2-VI-02	Kitchen—north side next to water service closet

Outdoor Air Sample Locations

Location ID	Sample Location Description
Q2-OA-01	South side of 163 Old River Road building—chained to fence
Q2-OA-02	Northwest of parking lot—chained to fence

Table 1b. Indoor and Outdoor Air Sampling Log—December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

Field ID	Location Description	Canister ID	Flow Controller ID	Flow Controller Rate	Sample Start Date	Sample Start Time	Initial Canister Pressure ("Hg)		20-hr Check Time	20-hr Pressure - Analog ("Hg)	Sample End Date	Sample End Time	Final Pressure ("Hg)		Final Lab Pressure ("Hg)
							Analog Gauge	Digital Gauge					Analog Gauge	Digital Gauge	Digital Gauge
Q2-IA-01-121515	Kitchen—counter top	AC00580	FCR00017	24 hr	12/14/15	14:09	-30	-29.97	10:15	-10	12/15/15	15:26	-5	-5.93	-2.68
Q2-IA-02-121515	1st floor dinning room—on table near wall	AC00714	FCR00003			14:12	-30	-29.96	10:12	-8		15:23	-4	-2.27	-0.80
Q2-IA-03-121515	2nd floor dining room—on partition in center of room	AC01884	FCR00016			14:15	-30	-29.89	10:10	-10.5		15:27	-6	-4.47	-1.96
Q2-DUP1-121515		AS00605	FCR00028				-25.5	-29.97		-10.5			-7.5	-12.1	-5.69
Q2-OA-01-121515	South of bldg chained to fence	AC02026	FCR00011			14:21	-24.5	-29.94	10:14	-9.5		15:21	-5.5	-5.02	-2.70
Q2-OA-02-121515	Northwest of parking lot chained to fence	AS00751	SFC00034			14:18	-30	-29.94	10:13	-8		13:50	-3.5	-3.77	-1.58

Notes:

ID = identification

"Hg = inches of mercury

hr = hour

Table 1c. Subslab Soil Gas Sampling Log—December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

Field ID	Location Description	Purge and Sample Start Date	Purge Start Time	Purge Rate (mL/min)	Purge End Time	Water Dam Leak Check[1] (pass/fail)	Total VOCs in Purge Gas (ppm)	Meter from Purged Gas (%v)			Canister ID	Pressure Gauge ID	Flow Controller ID	Flow Controller Rate	Sample Start Time	Initial Canister Pressure ("Hg)		20-hr Check Time	20-hr Pressure - Analog ("Hg)	Sample End Date	Sample End Time	Final Pressure ("Hg)		Final Lab Pressure ("Hg)
								Oxygen	Carbon Dioxide	Methane						Analog Gauge	Digital Gauge					Analog Gauge	Digital Gauge	Digital Gauge
Q2-VI-01-121515	Storage room next to stairs	12/14/15	15:30	200	15:34	Pass	1.1	20.7	0.2	0	AS00862	AVG04490	FCA00427	24 hr	15:38	-30	-29.94	10:16	-7	12/15/15	13:42	-3	-5.95	-2.66
Q2-VI-02-121515	Kitchen—north side next to water service closet		13:51	200	13:56	Pass	1.1	20.6	0.2	0	AC01493	AVG04347	FCA00404		14:01	-27	-29.94	10:08	-9		15:25	-3	-3.31	-1.37

Notes:

ID = identification

mL/min = milliliters per minute

%v = percent by volume

"Hg = inches of mercury

hr = hour

[1] = the subslab soil gas probes are Cox Colvin brand Vapor Pins and are leak tested in accordance with the Cox Colvin water dam leak test metho

Table 2a. Sample Locations—Winter 2015/2016 Vapor Intrusion Monitoring Event

103 River Road Building

Quanta Site, Edgewater, New Jersey

Indoor Air Sample Locations

Location ID	Sample Location Description
Q3-IA-01	Medical office storage room
Q3-IA-02	Dentist office hallway by exit door
Q3-IA-03	Medical office reception area
Q3-IA-04	Medical office utility room

Subslab Sample Locations

Location ID	Sample Location Description
Q3-VI-01	Medical office storage room
Q3-VI-02	South stairwell
Q3-VI-03	Medical office utility room

Outdoor Air Sample Locations

Location ID	Sample Location Description
Q3-OA-01	North side of 103 River Road building
Q3-OA-02	Southwest corner of the 103 RR Building

Table 2b. Indoor and Outdoor Air Sampling Log—December 2015

103 River Road Building

Quanta Site, Edgewater, New Jersey

Field ID	Location Description	Canister ID	Flow Controller ID	Flow Controller Rate	Sample Start Date	Sample Start Time	Initial Canister Pressure ("Hg)		20-hr Check Time	20-hr Pressure - Analog ("Hg)	Sample End Date	Sample End Time	Final Pressure ("Hg)		Final Lab Pressure ("Hg)
							Analog Gauge	Digital Gauge					Analog Gauge	Digital Gauge	Digital Gauge
Q3-IA-01-121815	Medical Office Storage Room	AS00243	FCR00044	24 hr	12/17/15	12:38	-29	-29.90	9:08	-8.5	12/18/15	13:03	-5	-4.90	-4.21
Q3-IA-02-121815	Dentist Office Hallway	AS00779	FCR00054			12:39	-29.5	-29.98	8:48	-10.5		12:44	-7	5.94	-5.23
Q3-IA-03-121815	Medical Office Reception Area	AS00168	FCP00001			12:40	-30+	-29.96	9:03	-9		13:00	-5.5	-5.55	-4.88
Q3-IA-04-121815	Medical Office Utility Room	AC02009	FCR00013			12:36	-30	-29.99	9:06	-8.5		13:01	-5	-4.60	-3.92
Q3-OA-01-121815	North of 103 River Road Building on Fence	AS00327	FCR00049			12:41	-30	-29.99	8:46	-9.5		12:47	-5.5	-4.64	-3.90
Q3-OA-02-121815	Southwest corner of the 103 RR Building	AS00820	FCR00025			12:40	-29	-29.89	8:43	-7.5		12:46	-4	-4.10	-3.35

Notes:

ID = identification

"Hg = inches of mercury

hr = hour

Table 2c. Subslab Soil Gas Sampling Log—December 2015

103 River Road Building

Quanta Site, Edgewater, New Jersey

Field ID	Location Description	Purge and Sample Start Date	Purge Start Time	Purge Rate (mL/min)	Purge End Time	Water Dam Leak Check[1] (pass/fail)	Total VOCs in Purge Gas (ppm)	GEM 2000 Landfill Gas Meter from Purged Gas (%v)			Canister ID	Flow Controller ID	Flow Controller Rate	Sample Start Time	Initial Canister Pressure ("Hg)		20-hr Check Time	20-hr Pressure - Analog ("Hg)	Sample End Date	Sample End Time	Final Pressure ("Hg)		Final Lab Pressure ("Hg)
								Oxygen	Carbon Dioxide	Methane					Analog Gauge	Digital Gauge					Analog Gauge	Digital Gauge	Digital Gauge
Q3-VI-01-121815	Medical Office Storage Room	12/17/15	15:40	200	15:45	Pass	0.5	20.2	0.4	0	AC00998	AVG04234	24 hr	15:47	-30	-29.91	9:09	-11	12/17/15	15:53	-4	-4.10	-3.86
Q3-VI-02-121815	South Stairwell		16:12	200	16:15	Pass	0.8	20.5	0.4	0	AS00725	AVG04528		16:17	-29	-29.93	9:10	-15		16:28	-7	-7.21	-6.35
Q3-VI-03-121815	Medical Office Utility Room		15:03	200	13:06	Pass	1.4	20.7	0.1	0	AC01578	FCA00500		15:10	-30	-29.96	9:07	-12		15:40	-5	-5.03	-3.54
Q3-DUP1-121815											AC01424	FCA00632			-28.5	-29.93		-10.5			-4.5	-5.57	-4.68

Notes:

ID = identification

mL/min = milliliters per minute

%v = percent by volume

"Hg = inches of mercury

hr = hour

[1] = the subslab soil gas probes are Cox Colvin brand Vapor Pins and are leak tested in accordance with the Cox Colvin water dam leak test method

Table 3a. Sample Locations—Winter 2015/2016 Vapor Intrusion Monitoring Event

115 River Road Building

Quanta Site, Edgewater, New Jersey

Indoor Air Sample Locations

Location ID	Bldg #	Floor	Sample Location Description
Q1-IA-32	2	1st	Center of main open space on table
Q1-IA-13	3	2nd	Suite 321—open workspace on south side near center of Bldg 3
Q1-IA-35	4	1st	Conference room on side table (center of Building 4)
Q1-IA-28	6	1st	Storage room on north side near former stairway
Q1-IA-36	7	1st	Suite 701—east side of main room next to fighting ring
Q1-IA-37	7/8	1st	West side of main room next to men's restroom
Q1-IA-21	7/8	Basement	Hallway near Bldg 7/8 Sump 2
Q1-IA-23	7/8	Basement	Far east room—middle of room near the floor drain
Q1-IA-24	7/8	Basement	Far west room—next to elevator shaft
Q1-IA-25	7/8	Basement	West side, main room near Bldg 7/8 Sump 1
Q1-IA-42	8	2nd	Suite 824—corner of inner office near elevator
Q1-IA-43	8	3rd	Suite 830—entrance area near elevator
Q1-IA-40	9	1st	Suite 901—west side utility room
Q1-IA-41	9	1st	Suite 901—east side storage room
Q1-IA-22	10	Basement	Main room—center of room
Q1-IA-03	10	Basement	Northeastern most storage room with sump
Q1-IA-44	10	1st	Suite 1001—center of main room
Q1-IA-45	10	1st	Suite 1003—center of reception area
Q1-IA-46	10	2nd	Suite 1026—on staircase in back of office
Q1-IA-39	11	1st	West side of main room

Crawl Space Air Sample Locations

Location ID	Bldg #	Floor	Sample Location Description
Q1-CS-01	6	Crawl Space	Northwest side
Q1-CS-04	4	Crawl Space	South side
Q1-CS-05	3	Crawl Space	South side
Q1-CS-07	2	Crawl Space	South side

Outdoor Air Sample Locations

Location ID	Bldg #	Floor	Sample Location Description
Q1-OA-03	10	Fence	115 River Road south parking lot chained to fence
Q1-OA-06	1	Fence	North side of 115 River Road near Hudson River at Quanta site Fence
Q1-OA-09	1	Fence	South of 115 RR Bldg next to Hudson River
Q1-OA-10	12	Fence	Northwest corner of Building 12 at Quanta Site fence

Table 3b. Indoor, Crawl Space and Outdoor Air Sampling Log—December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

Field ID	Bldg #	Floor	Location Description	Canister ID	Flow Controller ID	Flow Controller Rate	Sample Start Date	Sample Start Time	Initial Canister Pressure ("Hg)		20-hr Check Time	20-hr Pressure - Analog ("Hg)	Sample End Date	Sample End Time	Final Field Pressure ("Hg)		Final Lab Pressure ("Hg)
									Analog Gauge	Digital Gauge					Analog Gauge	Digital Gauge	Digital Gauge
Q1-IA-32-121715	2	1st	Center of main open space on table	AS00744	SFC00018	24 hr	12/16/2015	14:26	-29	-30.13	9:43	-12.5	12/17/2015	14:28	-8.5	-8.14	-7.47
Q1-IA-13-121715	3	2nd	Suite 321 - open workspace on south side near center of Bldg 3	AS00658	SFC00059	24 hr	12/16/2015	14:50	-30	-30.11	10:14	-21	12/17/2015	16:36	-14.5	-14.16	-13.60
Q1-DUP3-121715				AC01235	FCR00069				-30	-30.16		-12			-5.5	-5.55	-5.09
Q1-IA-35-121715	4	1st	Conference room on table (west side of Building 4)	AS00791	SFC00064	24 hr	12/16/2015	13:36	-30	-28.75	9:55	-12	12/17/2015	13:53	-7.5	-3.36	-2.48
Q1-IA-28-121715	6	1st	Storage room on north side near former stairway	AC01096	EFC00008	24 hr	12/16/2015	13:27	-30	-30.12	9:57	-11	12/17/2015	13:46	-7	-6.30	-5.90
Q1-IA-36-121715 [1]	7	1st	Suite 701 - east side of main room next to fighting ring	AC00739	SFC00032	24 hr	12/15/2015	14:33	-30	-29.57	11:05	-30	—	—	—	—	—
Q1-IA-36-121715				AS00770	FCR00020	24 hr	12/16/2015	13:24	-30	-30.12	9:59	-10	12/17/2015	13:35	-6.5	-6.60	-6.23
Q1-IA-37-121615	7	1st	West side of main room next to men's restroom	AC01200	EFC00007	24 hr	12/15/2015	14:31	-30	-29.59	11:06	-14	12/16/2015	16:17	-9.5	-7.30	-6.35
Q1-IA-21-121615	7/8	Basement	Hallway near Bldg 7/8 Sump 2	AS00781	EFC00009	24 hr	12/15/2015	14:41	-30	-29.55	11:03	-12	12/16/2015	15:07	-8.5	-6.75	-5.41
Q1-IA-23-121615	7/8	Basement	Far east room - middle of room near the floor drain	AC01100	EFC00003	24 hr	12/15/2015	14:43	-30	-29.57	11:04	-9.5	12/16/2015	15:05	-5	-4.51	-3.40
Q1-IA-24-121615	7/8	Basement	Far west room - next to elevator shaft	AS00710	SFC00043	24 hr	12/15/2015	14:37	-30	-29.55	11:02	-13	12/16/2015	14:10	-10	-8.58	-7.45
Q1-DUP1-121615				AC01764	EFC00019				-29	-28.70		-7.5			-4	-3.75	-2.64
Q1-IA-25-121615	7/8	Basement	West side, main room near Bldg 7/8 Sump 1	AC01366	EFC00005	24 hr	12/15/2015	14:36	-30	-29.49	11:02	-12	12/16/2015	15:08	-9	-8.17	-7.06
Q1-IA-42-121615	8	2nd	Suite 824 - corner of inner office near elevator	AC02024	EFC00002	24 hr	12/15/2015	14:07	-30	-29.53	10:58	-13	12/16/2015	13:23	-9.5	-8.89	-7.83
Q1-IA-43-121815 [2]	8	3rd	Suite 830 - entrance area near elevator	AS00730	FCR90048	24 hr	12/15/2015	14:11	-30	-29.56	11:00	-11	12/17/2015	9:00	0	0	—
Q1-IA-43-121815				AS00830	FCR00068	24 hr	12/17/2015	13:15	-29.5	-29.92	9:18	-9	12/18/2015	13:27	-5	-5.56	-4.98
Q1-IA-40-121615	9	1st	Suite 901 - west side utility room	AC01987	SFC00063	24 hr	12/15/2015	13:33	-30	-29.56	10:55	-7.5	12/16/2015	14:00	-4.5	-4.62	-3.54
Q1-IA-41-121615	9	1st	Suite 901 - east side storage room	AS00571	SFC00026	24 hr	12/15/2015	13:34	-30	-29.52	10:56	-10	12/16/2015	13:58	-6	-4.67	-3.62
Q1-IA-22-121615	10	Basement	Main room - center of room	AS00623	SFC00031	24 hr	12/15/2015	14:19	-30	-29.52	10:53	-11	12/16/2015	15:17	-6.5	-5.80	-4.60

Table 3b. Indoor, Crawl Space and Outdoor Air Sampling Log—December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

Field ID	Bldg #	Floor	Location Description	Canister ID	Flow Controller ID	Flow Controller Rate	Sample Start Date	Sample Start Time	Initial Canister Pressure ("Hg)		20-hr Check Time	20-hr Pressure - Analog ("Hg)	Sample End Date	Sample End Time	Final Field Pressure ("Hg)		Final Lab Pressure ("Hg)
									Analog Gauge	Digital Gauge					Analog Gauge	Digital Gauge	Digital Gauge
Q1-IA-03-121615	10	Basement	Northeastern most storage room with sump	AS00868	SFC00027	24 hr	12/15/2015	14:21	-29.5	-29.39	10:54	-10	12/16/2015	15:18	-5.5	-5.24	-4.03
Q1-IA-44-121615	10	1st	Suite 1001 - center of main room	AS00640	SFC00005	24 hr	12/15/2015	14:48	-29	-29.53	10:52	-8	12/16/2015	15:13	-4.5	-5.71	-4.64
Q1-IA-45-121615	10	1st	Suite 1003 - center of reception area	AC01362	SFC00048	24 hr	12/15/2015	14:49	-30	-29.54	10:51	-11	12/16/2015	15:15	-7	-5.93	-4.84
Q1-IA-46-121715	10	2nd	Suite 1026- On staircase in back of office space	AS00487	FCR00070	24 hr	12/16/2015	15:05	-30	-30.16	10:07	-10	12/17/2015	15:20	-4.5	-4.54	-4.21
Q1-IA-39-121615	11	1st	West side of main room	AS00338	SFC00038	24 hr	12/15/2015	13:24	-30	-29.50	10:28	-13	12/16/2015	14:04	-8	-5.03	-3.90
Q1-CS-01-121715	6	Crawl Space	Bldg 6 NW side	AC02064	SFC00033	24 hr	12/16/2015	13:35	-28.5	-30.05	10:01	-9	12/17/2015	13:39	-6.5	-7.21	-7.00
Q1-DUP2-121715				AC00982	SFC00006				-30	-29.46		-9			-5	-4.53	-4.37
Q1-CS-04-121715	4	Crawl Space	Bldg 4 S side	AS00514	SFC00045	24 hr	12/16/2015	15:55	-30	-30.07	9:51	-13	12/17/2015	14:04	-7	-6.40	-5.90
Q1-CS-05-121715	3	Crawl Space	Bldg 3 S side	AS00754	FCR00036	24 hr	12/16/2015	16:00	-30	-30.07	9:51	-13	12/17/2015	14:03	-7	-8.12	-7.71
Q1-CS-07-121715	2	Crawl Space	Bldg 2 S side	AC02108	FCR00010	24 hr	12/16/2015	15:45	-30	-30.01	9:50	-12	12/17/2015	14:02	-6.5	-7.50	-7.00
Q1-OA-03-121615	NA	Fence	115 RR bldg south parking lot	AC00686	SFC00011	24 hr	12/15/2015	15:02	-30	-29.48	11:10	-11	12/16/2015	15:31	-7.5	-6.03	-4.68
Q1-OA-06-121615	NA	Fence	North side of 115 River Road near Hudson River at Quanta site fence	AC01411	EFC00023	24 hr	12/15/2015	15:11	-30	-29.52	11:20	-10	12/16/2015	15:34	-6	-5.21	-3.76
Q1-OA-09-121715	NA	Fence	South of 115 RR Bldg next to river	AS00712	FCR00038	24 hr	12/16/2015	16:05	-30	-30.14	9:49	-12	12/17/2015	16:29	-5	-4.37	-4.03
Q1-OA-10-121715	NA	Fence	NW corner of Bldg 12	AC01775	FCR00004	24 hr	12/16/2015	16:10	-29.5	-30.16	10:03	-12	12/17/2015	16:32	-5	-1.93	-1.58

Notes:

ID = identification

"Hg = inches of mercury

hr = hour

[1] = sample was not analyzed. Sampling did not occur due to flow controller malfunction

[2] = sample was not analyzed. Sample was unable to be collected 24 hours after deployment due to office access issues

Appendix C
Building Survey Forms

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: TAYLOR SALSBURG Date: 12/15/15

Preparer's affiliation: CH2M Phone #: 973-316-3591

Site Name: QUANTA RESOURCES Case #: EPA # NJD000606442

Part I - Occupants

Building Address: 1163 OLD RIVER, EDGEWATER, NJ

Property Contact: SCOTT HAEGNEY (Owner) / Renter / other: _____

Contact's Phone: home ( )_____ work (201) 945-8647 cell 201 838-4642

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults X CLOSED RESTAURANT

Part II – Building Characteristics

Building type: residential / multi-family residential / office / strip mall / (commercial) / industrial

Describe building: RESTAURANT (CLOSED) / 2-story Year constructed: UNKNOWN

Sensitive population: day care / nursing home / hospital / school / other (specify): None

Number of floors below grade: 0 (full basement / (crawl space) Partial / (slab on grade) Partial)

Number of floors at or above grade: 2 (ONLY 1/2 OF BLDG HAS 2 FLOORS)

Depth of basement below grade surface: 0 ft. ~~Basement~~ Footprint size: 6,000 ft²

~~Basement floor~~ Slab construction: (concrete) / dirt / floating / stone / other (specify): _____

Foundation walls: poured concrete / cinder blocks / stone / other (specify) UNKNOWN

Basement sump present? (Yes) / No Sump pump? (Yes) / No Water in sump? Yes / No UNKNOWN

Type of heating system (circle all that apply):

(hot air circulation) hot air radiation wood steam radiation

heat pump (hot water radiation) kerosene heater ~~electric~~ baseboard

other (specify): Base boards in 1st Floor dining room HOT WATER BASEBOARD IN 1ST FLOOR DINING RM

Type of ventilation system (circle all that apply):

(central air conditioning) mechanical fans (bathroom ventilation fans) ~~individual air~~

conditioning units (kitchen range hood fan) outside air intake

other (specify): _____

Type of fuel utilized (circle all that apply):

(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the ~~basement walls or floor~~ Slab sealed with waterproof paint or epoxy coatings? (Yes) / No — in kitchen storage room FLOOR PAINT

Is there a whole house fan? *Yes* / (*No*)

Septic system? *Yes* / *Yes (but not used)* / (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*)

Type of ground cover outside of building: grass / concrete / (asphalt) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes* / (*No*)
Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): QUANTIA RESOURCES SUPERFUND

Other stationary sources nearby (gas stations, emission stacks, etc.): GAS STATION 1/2 MI SOUTH, HESS REFINERY 1/2 MI NORTH

Heavy vehicular traffic nearby (or other mobile sources): RIVER RD (5 LANE, BUSY) COFFEE ASSOCIATES NEXT DOOR

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		—
Gas-powered equipment		—
Kerosene storage cans		—
Paints / thinners / strippers		—
Cleaning solvents	IN STORAGE, ON BAR	NO
Oven cleaners	IN STORAGE	NO
Carpet / upholstery cleaners	IN STORAGE	NO
Other house cleaning products		NO
Moth balls		—
Polishes / waxes		—
Insecticides		—
Furniture / floor polish		—
Nail polish / polish remover		—
Hairspray		—
Cologne / perfume		—
Air fresheners	IN BATHROOM, CANDLES ALSO	NO
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		—
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		NO

BAD ODOR IN KITCHEN, ROTTING/DECAYING FOOD, FLIES + MOLD ON FOOD, CLEANING SUPPLIES IN STORAGE INCLUDING: WINDEX, CLOROX, CARPET CLEANER. 1 SPRAY PAINT CAN IN STORAGE

Part V – Miscellaneous Items

Do any occupants of the building smoke? *Yes* / (No) NO OCCUPANTS CURRENTLY How often? _____

Last time someone smoked in the building? UNKNOWN hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (No)

If so, is a car usually parked in the garage? *Yes* / (No)

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / (No)

Do the occupants of the building have their clothes dry cleaned? *Yes* / (No) unoccupied

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (No)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / No UNKnown

If so, when and which chemicals? Used to be applied B.-weekly temp° SC (11.6% cyAutrin) Not sure if this is still the case due to no occupancy.

Has there ever been a fire in the building? *Yes* / (No) If yes, when? _____

Has painting or staining been done in the building in the last 6 months? *Yes* / (No)

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: TAYLOR SALSBURG Phone number: (973) 316 - 3591

Sample Source: ~~Indoor Air~~ / ~~Sub-Slab~~ / Near Slab Soil Gas / Exterior Soil Gas + (OUTDOOR AIR)

Sampler Type: ~~Tedlar bag~~ / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): SEE TECH ITEM0

Field ID # Q2 - IA - 01 Field ID # Q2 - IA - 03

Field ID # Q2 - IA - 02 Field ID # Q2 - OA - 01

Q2 - VI - 01, 02 Q2 - OA - 02

Were "Instructions for Occupants" followed? Yes / (No)

If not, describe modifications: Unoccupied

Provide Drawing of Sample Location(s) in Building

SEE ATTACHED FIGURE FROM WORK PLAN

Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) No

Describe the general weather conditions: OVERCAST W/ SOME RAIN OVERNIGHT. TEMP AROUND 50's DROP TO 40's

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/18/15

Preparer's affiliation: CH2M HILL Phone #: (973) 316-3525

Site Name: Quanta Resources Superfund site Case #: EPA # NJD000606442

Part I - Occupants

Building Address: 103 River Road, Edgewater, NJ [Medical Arts Building]

Property Contact: Danny Daibes (Owner) / Renter / other: Medical office (201) 845-4288 Dental office (201) 840-0045

Contact's Phone: home ( ) work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 ____ Children age 13-18 ____ Adults ____

approx. 3 workers in 1st Floor Medical office plus patients

approx. 3~~7~~ workers in 1st Floor dental office plus patients

Part II – Building Characteristics

Building type: residential / multi-family residential / (office) / strip mall / (commercial) / industrial

Describe building: 2 story, 3 separate offices Year constructed: early 1980s

Sensitive population: day care / nursing home / hospital / school / other (specify): medical / dental office

Number of floors below grade: 0 (full basement / crawl space / (slab on grade))

Number of floors at or above grade: 2

Depth of basement below grade surface: 0 ft. ~~Basement~~ footprint size: 5,000 ft²

~~Basement~~ floor construction: (concrete) / dirt / floating / stone / other (specify): ____

Foundation walls: poured concrete / (cinder blocks) / stone / other (specify) ____

Basement sump present? *Yes* / (*No*) Sump pump? *Yes* / *No* Water in sump? *Yes* / *No*

Type of heating system (circle all that apply):

hot air circulation	hot air radiation	wood	steam radiation
heat pump	hot water radiation	kerosene heater	(electric baseboard)
other (specify): ____			

Type of ventilation system (circle all that apply):

(central air conditioning)	mechanical fans	bathroom ventilation fans individual air conditioning units
kitchen range hood fan	outside air intake	
other (specify): ____		

Type of fuel utilized (circle all that apply):

(Natural gas) / (electric) / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? *Yes* / (*No*)

→ 2nd Floor is Cardiologist office - No sampling there.

Is there a whole house fan? *Yes* / (*No*) There is an air handling unit

Septic system? *Yes* / *Yes (but not used)* / (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*)

Type of ground cover outside of building: (grass) concrete / (asphalt) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes / No* There may be a moisture vapor barrier.
Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund Site

Other stationary sources nearby (gas stations, emission stacks, etc.): Hess facility (1 mile N), gas station (1/2 mile S...

Heavy vehicular traffic nearby (or other mobile sources): River Road (5-lane busy road)

→ Sewer Pump Station on Property (strong odor), Coffee Associates nearby

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)	
Gasoline storage cans			
Gas-powered equipment			
Kerosene storage cans			
Paints / thinners / strippers	~ 15 cans of paint for office walls	No	→ In medical office utility room
Cleaning solvents			
Oven cleaners			
Carpet / upholstery cleaners			
Other house cleaning products	hand soaps / medical cleanliness products	NO	→ In Bathrooms / Break rooms
Moth balls			
Polishes / waxes			
Insecticides			
Furniture / floor polish			
Nail polish / polish remover			
Hairspray			
Cologne / perfume			
Air fresheners	Lysol spray in bathroom	NO	
Fuel tank (inside building)		NA	
Wood stove or fireplace		NA	
New furniture / upholstery			
New carpeting / flooring		NA	
Hobbies - glues, paints, etc.			

Utility room: 5 gal bucket of Super hide coating, Container of floor finish, Floor tile adhesive, several buckets of joint Compound, 1 UNK 55 gallon drum (rusted a bit on bottom but no staining near drum, no odor, no apparent leaks), everything well kept.

Smoking outside of building in Parking area.

Part V – Miscellaneous Items

Do any occupants of the building smoke? *Yes* / (No) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (No)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? (Yes) / *No* Doctor's wear dry-Cleaned Suits, No Clothing Stored at bldg.

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (No)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / (No) If yes, when? _____

Has painting or staining been done in the building in the last 6 months? (Yes) / *No*

If yes, when last couple months and where? walls in building (medical area of universal medicine)

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3525

Sample Source: (Indoor Air) / (Sub-Slab) / Near Slab Soil Gas / Exterior Soil Gas (Outdoor Air)

Sampler Type: (Tedlar bag) / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See Report Tables

Field ID # Q3 - IA - 01, 02, 03, 04 Field ID # Q3 - VI - 01, 02, 03

Field ID # Q3 - OA - 01, 02 Field ID # Q3 - Dup 1

Were "Instructions for Occupants" followed? Yes / (No)

If not, describe modifications: No Instructions Given

Provide Drawing of Sample Location(s) in Building

See attached workplan figure.

Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) / No

Describe the general weather conditions: Rain began at ~ 10:30 am on 12/17 and continued for the majority of the day (heavy rain) stopped around 1600. Samples were started on 12/17 and collected 12/18. 12/18 was overcast, slight rain in the morning and ~ 50° F.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

None.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/16/15

Preparer's affiliation: CH2M HILL Phone #: (973) 316-3575

Site Name: Quanta Resources Case #: EPA # NJ 000 606 442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ (Bldg 2)

Property Contact: Danny Daibes (Owner) / Renter / other: _____

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults ~4-5

Part II – Building Characteristics

Building type: residential / multi-family residential / (office) / strip mall / commercial / industrial

Describe building: 2 story brick office building Year constructed: early 1900s ?

Sensitive population: day care / nursing home / hospital / school / other (specify): None

Number of floors below grade: 0 (full basement / (crawl space) / slab on grade)
→ unknown/varying height

Number of floors at or above grade: 2

Depth of basement below grade surface: 0 ft. Footprint ~~Basement~~ size: ~2,000 ft²

~~Basement~~ floor construction: (concrete) / dirt / floating / stone / other (specify): concrete floor on top of wood

Foundation walls: poured concrete / cinder blocks / stone / (other) (specify) wood pilings & beams / Brick walls above ground

~~Basement~~ sump present? *Yes* / (*No*) Sump pump? *Yes* / *No* Water in sump? *Yes* / *No*

Type of heating system (circle all that apply): Propane space heater sometimes used

hot air circulation	hot air radiation	wood	steam radiation
heat pump	(hot water radiation)	kerosene heater	electric baseboard
other (specify): hot water baseboard			

Type of ventilation system (circle all that apply):

(central air conditioning)	mechanical fans	bathroom ventilation fans individual air
conditioning units	kitchen range hood fan	outside air intake
other (specify): _____		

Type of fuel utilized (circle all that apply):
(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? *Yes* / (*No*)

Is there a whole house fan? *Yes* / (*No*)

Septic system? *Yes* / *Yes (but not used)* / (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*)

Type of ground cover outside of building: (grass) / concrete / (asphalt) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor/(moisture barrier) in place? (*Yes*) / *No*

Type of barrier: Sheet plastic

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund site next to property N

Other stationary sources nearby (gas stations, emission stacks, etc.): Gas station 1/2 mile S, Hess facility 1 mile N

Heavy vehicular traffic nearby (or other mobile sources): River Road (busy 5-lane road)

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners	Carpeting through office	No
Other house cleaning products	Bathroom soap	No
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		

Part V – Miscellaneous Items

outside of building in parking lot

Do any occupants of the building smoke? *Yes* / (No) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (No)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? *Yes* / (No)

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (No)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / *No* If yes, when? unknown, not recently

Has painting or staining been done in the building in the last 6 months? *Yes* / (No)

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3525

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas (Crawl space air)

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See Report Tables

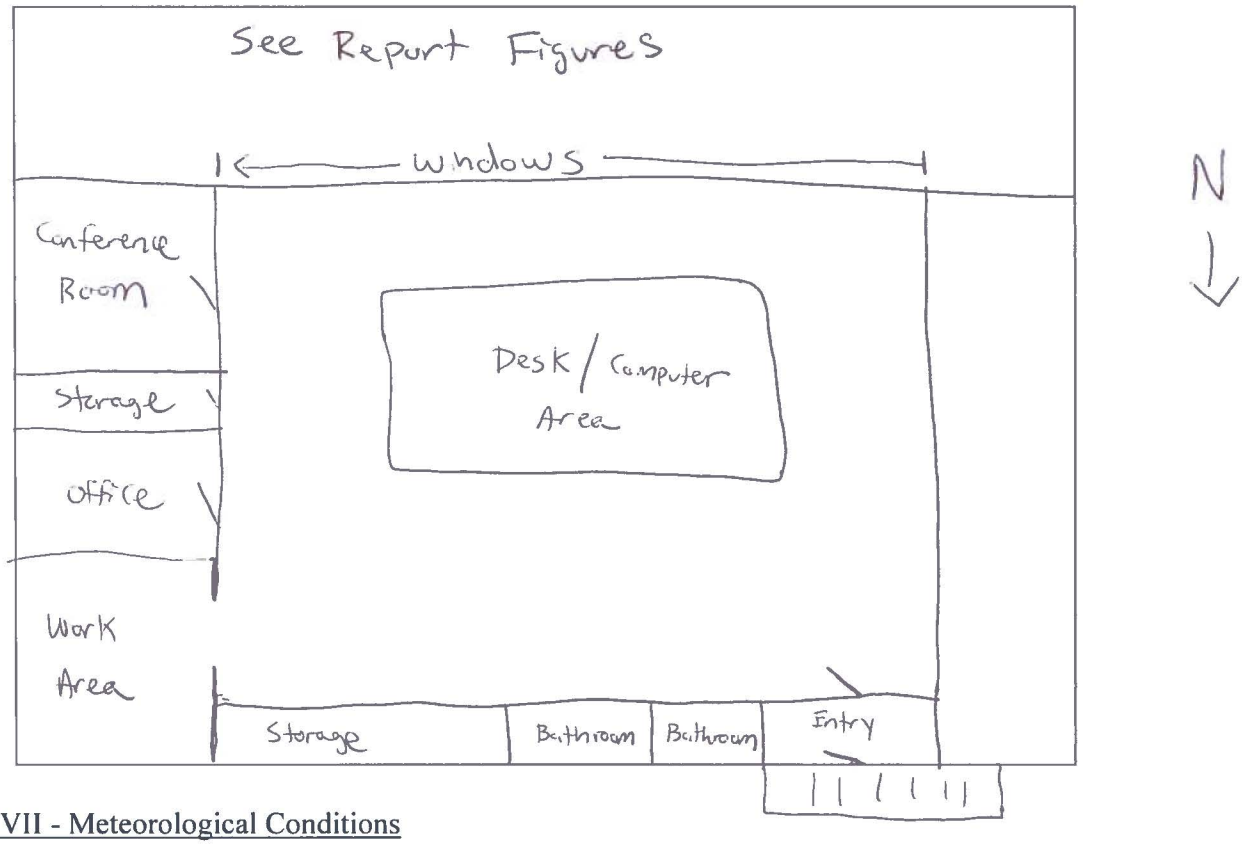
Field ID # Q1 - IA-32 Field ID # ____ - _____

Field ID # Q1 - CS-07 Field ID # ____ - _____

Were "Instructions for Occupants" followed? Yes / (No)

If not, describe modifications: No instructions given

Provide Drawing of Sample Location(s) in Building



Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) / No

Describe the general weather conditions: Rained all day on the day of Sample Collection (12/17)

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

None.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/18/15

Preparer's affiliation: CH2M HILL Phone #: (973) 316-3525

Site Name: Quanta Resources Case #: EPA # NJ000606442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ Bldg. 3 (2nd Floor)

Property Contact: Danny Daibes (Owner) / Renter / other: _____

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 ____ Children age 13-18 ____ Adults 0

Part II – Building Characteristics

1st Floor is Completely Vacant
2nd Floor was formerly IDI, but is now vacant

Building type: residential / multi-family residential / (office) / strip mall / (commercial) / industrial

Describe building: 2 story brick office bldg. Year constructed: early 1900s

Sensitive population: day care / nursing home / hospital / school / other (specify): None

Number of floors below grade: 0 (full basement / (crawl space) / slab on grade)

Number of floors at or above grade: 2 → unknown / varying height

Depth of basement below grade surface: 0 ft. ~~Basement~~ Footprint size: ~4,400 ft²

~~Basement~~ floor construction: (concrete) / dirt / floating / stone / other (specify): Floor ontop of wood

Foundation walls: poured concrete / cinder blocks / stone / (other) (specify) wood pilings / wood beams Brick walls above ground

Basement sump present? *Yes* / (*No*) Sump pump? *Yes* / *No* Water in sump? *Yes* / *No*

Type of heating system (circle all that apply):

(hot air circulation)	hot air radiation	wood	steam radiation
heat pump	~~hot water radiation~~	kerosene heater	electric baseboard
other (specify): hot water base boards		~~Some~~	

Type of ventilation system (circle all that apply):

(central air conditioning)	mechanical fans	bathroom ventilation fans individual air
~~(conditioning units)~~	kitchen range hood fan	outside air intake
other (specify): _____		

Type of fuel utilized (circle all that apply):
(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? *Yes* / (*No*)

HVAC system not functional b/c of vacant building.

Is there a whole house fan? *Yes* / (*No*)

Septic system? *Yes* / *Yes (but not used)* / (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*)

Type of ground cover outside of building: (grass) / concrete / (asphalt) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor (moisture barrier) in place? (*Yes*) / *No*

Type of barrier: Sheet plastic for moisture

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund Site (North of 115 RR)

Other stationary sources nearby (gas stations, emission stacks, etc.): Hess Facility 1 mile N, gas station ½ mile S

Heavy vehicular traffic nearby (or other mobile sources): River Road (Busy 5-lane road)

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products	Cleaning products lying around (not many)	No
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.	Abunch of art/craft supplies	No

Building was vacant, lots of design supplies was just left on the second floor, some products such as food and sunscreen were left, and some minor art/craft supplies.

Part V – Miscellaneous Items

Vacant

Do any occupants of the building smoke? *Yes* / (*No*) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (*No*)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? *Yes* / (*No*) Vacant

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (*No*) Vacant

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? Previous tenant had pest control for mice.

Has there ever been a fire in the building? *Yes* / *No* If yes, when? unknown / not recently

Has painting or staining been done in the building in the last 6 months? *Yes* / (*No*) Unknown

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3525

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas (crawl space air)

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See Report Tables

Field ID # Q1 - IA-13 Field ID # ____ - _____

Field ID # Q1 - CS-05 Field ID # ____ - _____

Were "Instructions for Occupants" followed? Yes (*No*)

If not, describe modifications: No occupants

Provide Drawing of Sample Location(s) in Building

See attached Sample floorplan/
Report Figures

Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) / No

Describe the general weather conditions: Rained the entire day of collection (12/17/15)

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

Former CS location was no longer accessible (hole in floor tile was fixed), so sample was collected from the outside going into the crawl space. Indoor air sample was taken on the 2nd Floor, in planned location.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/18/15

Preparer's affiliation: CH2M HILL Phone #: (973) 316-3525

Site Name: Quanta Resources Superfund Site Case #: EPA # NJ0000606442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ - Buildings 4-6 (1st & 2nd Floors)

Property Contact: Danny Daibes (Owner) / Renter / other: _____

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults X

Approx. 20 workers

Part II – Building Characteristics

Building type: residential / multi-family residential / (office) / strip mall / commercial / industrial

Describe building: Brick & Corregated Metal Year constructed: Early 1900s

Sensitive population: day care / nursing home / hospital / school / other (specify): None

Number of floors below grade: _____ (full basement / (crawl space) / slab on grade)

Number of floors at or above grade: 3

Depth of basement below grade surface: _____ ft. ~~Basement~~ Footprint size: _____ ft²

Bldg. 4 - 2,000 ft²
Bldg. 5 - 800 ft²
Bldg. 6 - 1,400 ft²
Total = 4,200 ft²

Basement floor construction: concrete / dirt / floating / stone / (other) (specify): Concrete floor on top of wood

Foundation walls: poured concrete / cinder blocks / stone / (other) (specify) Foundation is wood beams on wood pilings.

Basement sump present? *Yes* / (*No*) Sump pump? *Yes* / *No* Water in sump? *Yes* / *No*

Type of heating system (circle all that apply):

(hot air circulation)	hot air radiation	wood	steam radiation
heat pump	hot water radiation	kerosene heater	electric baseboard

other (specify): _____

Type of ventilation system (circle all that apply):

(central air conditioning)	mechanical fans	bathroom ventilation fans individual air
conditioning units	kitchen range hood fan	outside air intake

other (specify): _____

Type of fuel utilized (circle all that apply):

(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? *Yes* / (*No*)

Is there a whole house fan? *Yes* / *(No)*

Septic system? *Yes* / *Yes (but not used)* / *(No)*

Irrigation/private well? *Yes* / *Yes (but not used)* / *(No)*

Type of ground cover outside of building: (grass) / concrete / (asphalt) / other (specify) _____
South North

Existing subsurface depressurization (radon) system in place? *Yes* / *(No)* *active / passive*

Sub-slab vapor/(moisture barrier) in place? *(Yes)* / *No*

Type of barrier: Sheet plastic

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund Site

Other stationary sources nearby (gas stations, emission stacks, etc.): Gas station 1/2 mile South, Hess facility 1 mile N

Heavy vehicular traffic nearby (or other mobile sources): River Road (5-lane busy road)

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers	Spray paint	No
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		

outside of building in parking lot

Part V – Miscellaneous Items

Do any occupants of the building smoke? *Yes* / (No) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (No)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? (Yes) / *No*

If yes, how often? (weekly) / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (No)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / (No) If yes, when? _____

Has painting or staining been done in the building in the last 6 months? *Yes* / (No)

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3525

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas + (Crawl Space Air)

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See Report Tables

Field ID # Q1 - IA-35 Field ID # Q1 - CS-01

Field ID # Q1 - IA-28 Field ID # Q1 - CS-04

Q1 - Dup 3

Were "Instructions for Occupants" followed? Yes (No)

If not, describe modifications: NO Instructions Given

Provide Drawing of Sample Location(s) in Building

See Report figures

Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) No

Describe the general weather conditions: Rained all day on 12/17, rained slightly in morning of 12/18.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

None.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/18/15

Preparer's affiliation: CH2M HILL Phone #: (973) 316-3525

Site Name: Quanta Resources Superfund Site Case #: EPA # NJ000606442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ - Building 7 (1st Floor UFC Gym)

Property Contact: Danny Davis (Owner) / Renter / other: _____

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults X

3 Employees and up to 25 Customers working out at a time

Part II – Building Characteristics

Building type: residential / multi-family residential / office / strip mall / (commercial) / industrial

Describe building: 3 Story Brick Year constructed: early 1900s

Sensitive population: day care / nursing home / hospital / school / other (specify): None

Number of floors below grade: 1 (full basement) / crawl space / slab on grade)

Number of floors at or above grade: 3

Depth of basement below grade surface: 4 ft. Bldg. Footprint ~~Basement~~ size: 6,400 ft²

Basement floor construction: (concrete) / dirt / floating / stone / other (specify): _____

Foundation walls: (poured concrete) / cinder blocks / stone / other (specify) _____

Basement sump present? (Yes) / No Sump pump? (Yes) / No Water in sump? ~~Yes~~ / No Cannot see

Type of heating system (circle all that apply):

hot air circulation	hot air radiation	wood	steam radiation
heat pump	(hot water radiation)	kerosene heater	electric baseboard
other (specify): _____ baseboards			

Type of ventilation system (circle all that apply):

(central air conditioning)	mechanical fans	bathroom ventilation fans individual air
conditioning units	kitchen range hood fan	outside air intake
other (specify): _____		

Type of fuel ~~utilized~~ (circle all that apply):

(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? Yes / (No)

Is there a whole house fan? *Yes* / (*No*)

Septic system? *Yes* / *Yes (but not used)* / (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*)

Type of ground cover outside of building: (grass) concrete (asphalt) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes* / (*No*)

Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund Site

Other stationary sources nearby (gas stations, emission stacks, etc.): Gas Station 1/2 mile South, Hess Facility 1 mile N

Heavy vehicular traffic nearby (or other mobile sources): River Road (5-lane busy road)

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products	Cleaning products for equipment/mats	No
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		

Part V – Miscellaneous Items

Do any occupants of the building smoke? *Yes* / (*No*) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (*No*)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? *Yes* / (*No*)

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (*No*)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / (*No*) If yes, when? _____

Has painting or staining been done in the building in the last 6 months? *Yes* / (*No*)

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3525

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See Report Tables

Field ID # Q1 - IA-36 Field ID # Q1 - IA-37

Field ID # ~~Q1 - CS-04~~ Field ID # ~~Q1 - CS-06~~

Were "Instructions for Occupants" followed? Yes (*No*)

If not, describe modifications: No Instructions given.

Provide Drawing of Sample Location(s) in Building

See Report Figures

Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) / No

Describe the general weather conditions: Rained all day (hard) on 12/17/15, rained in the morning of 12/18/15.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

None.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: TAYLOR SALISBURY Date: 12/16/15

Preparer's affiliation: CH2M Phone #: ~~215-6~~ 973-316-3591

Site Name: QUANTA RESOURCES Case #: EPA # NJ000606442

Part I - Occupants

Building Address: 115 RIVER RD, EDGEWATER, NJ BLDG 7/8 BASEMENT

Property Contact: Danny Daibes (Owner) / Renter / other: _____

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults _____ NONE IN BASEMENT

Part II – Building Characteristics

Building type: residential / multi-family residential / (office) / strip mall / (commercial) / industrial

Describe building: BRICK 3-STORY Year constructed: 1900s?

Sensitive population: day care / nursing home / hospital / school / other (specify): NONE

Number of floors below grade: 1 (full basement) / crawl space / slab on grade)

Number of floors at or above grade: 3

Depth of basement below grade surface: 4' ft. Bldg. Footprint ~~Basement~~ size: 6,400 ft²

Basement floor construction: (concrete) / dirt / floating / stone / other (specify): _____

Foundation walls: (poured concrete) (cinder blocks) / stone / other (specify) _____

Basement sump present? (Yes) / No Sump pump? (Yes) / No Water in sump? Yes / No CANNOT SEE

Type of heating system (circle all that apply):

hot air circulation	(hot air radiation)	wood	steam radiation
heat pump	~~hot water radiation~~	kerosene heater	electric baseboard

other (specify): One forced air unit in west side

Type of ventilation system (circle all that apply):

central air conditioning	mechanical fans	bathroom ventilation fans individual air
conditioning units	kitchen range hood fan	outside air intake

other (specify): LARGE DUCTS (1-3' DIAMETER) THROUGHOUT BASEMENT (for vapor intrusion mitigation)

Type of fuel utilized (circle all that apply):

(Natural gas) / ~~electric~~ fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? Yes / (No)

Is there a whole house fan? *Yes* / (No) Ventilation System

Septic system? *Yes* / *Yes (but not used)* / (No)

Irrigation/private well? *Yes* / *Yes (but not used)* / (No)

Type of ground cover outside of building: ~~grass~~ South / concrete (asphalt) North / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (No) *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes* / (No)

Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): QUANTA RESOURCES SUPERFUND SITE, NORTH

Other stationary sources nearby (gas stations, emission stacks, etc.): HESS FACILITY W/IN 1 MILE,

Heavy vehicular traffic nearby (or other mobile sources): RIVER RD (5 LANE, BUSY) GAS STATION W/IN 1/2 MI

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers	PAINT CANS, POLYURETHANE CANS (CLOSET)	NO
Cleaning solvents	CLOROX BLEACH (HALLWAY)	NO
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		
	GREAT STUFF CAN (NEAR ELEVATOR)	NO

NOT OCCUPIED

Part V – Miscellaneous Items

Do any occupants of the building smoke? *Yes* / (No) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (No)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / (No)

Do the occupants of the building have their clothes dry cleaned? *Yes* / (No) Not occupied

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / *No* (NA)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / (No) If yes, when? _____

Has painting or staining been done in the building in the last 6 months? *Yes* / (No)

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: TAYLOR SALSBURG Phone number: (973) 316 - 3591

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See report tables

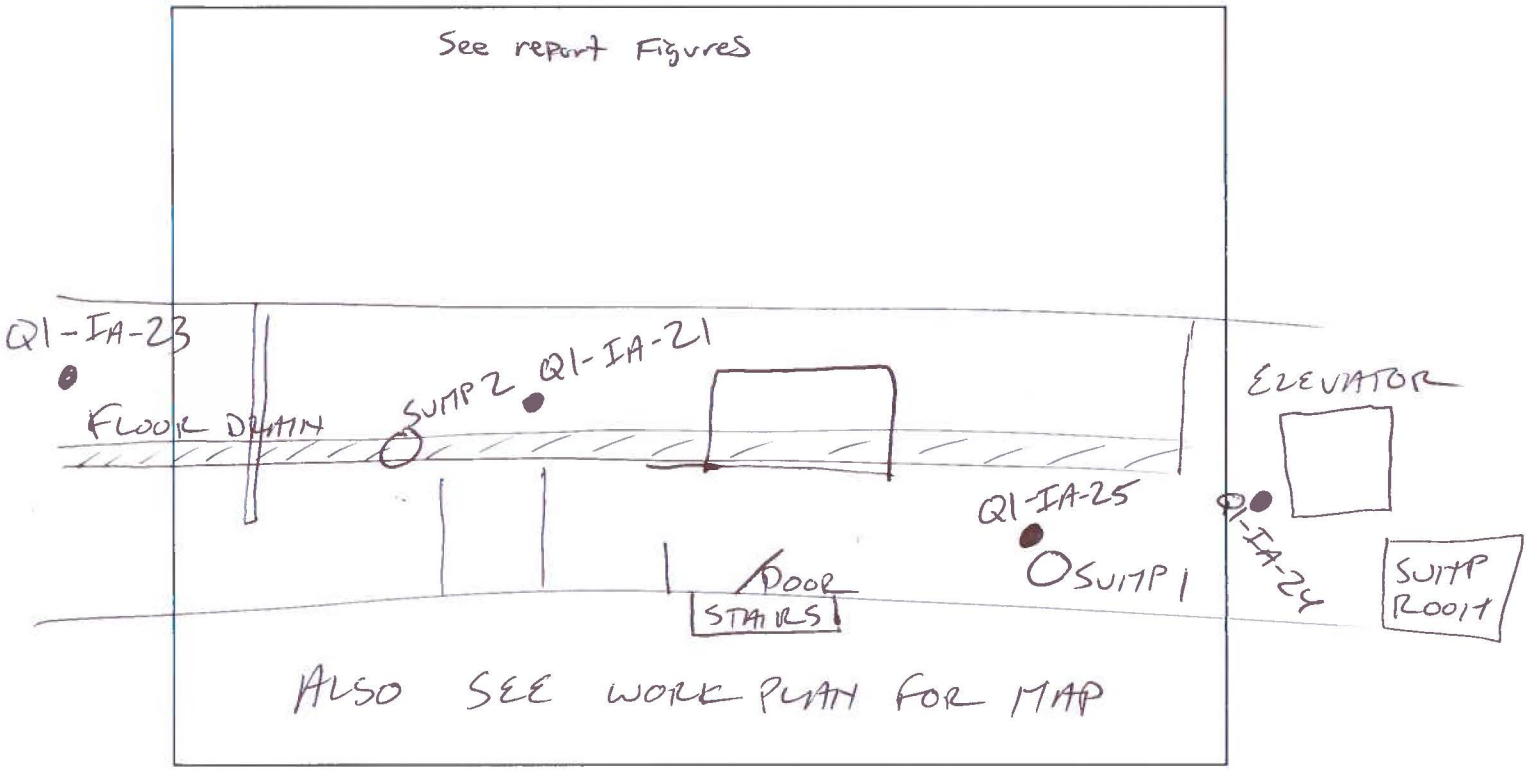
Field ID # Q1 - IA-21 Field ID # Q1 - IA-25

Field ID # Q1 - IA-23 Field ID # Q1 - IA-24

Were "Instructions for Occupants" followed? *Yes* / *No* NOT OCCUPIED

If not, describe modifications: _____

Provide Drawing of Sample Location(s) in Building



Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? *Yes* / (No)

Describe the general weather conditions: 50° F PARTLY CLOUDY

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

DOOR TO STAIRS OUTSIDE WAS OPEN UPON DEPLOYING. FOR 24 HOUR OVERNIGHT SAMPLE CHRT CLOSED THE DOOR

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/18/15

Preparer's affiliation: CH2M HILL Phone #: 973-316-3591

Site Name: Quanta Resources Superfund Site Case #: EPA # NJD000606442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ - Bldg. 8

Property Contact: Danny Daibes (Owner) / Renter / other: _____

Contact's Phone: home ( )_____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults X

2nd Floor - 2-4 adult workers
3rd Floor - 12 adult workers

Part II – Building Characteristics

Building type: residential / multi-family residential / (office) / strip mall / commercial / industrial

Describe building: 3 Story Brick building Year constructed: early 1900s

Sensitive population: day care / nursing home / hospital / school / other (specify): None

Number of floors below grade: 1 (full basement) / crawl space / slab on grade)

Number of floors at or above grade: 3

Depth of basement below grade surface: 4 ft. Basement size: _____ ft²

Basement floor construction: (concrete) / dirt / floating / stone / other (specify): _____

Foundation walls: (poured concrete) / cinder blocks / stone / other (specify) _____

Basement sump present? (*Yes*) / *No* Sump pump? (*Yes*) / *No* Water in sump? *Yes* / *No*

Type of heating system (circle all that apply): 2nd Floor has electric base board and plug in unit Cannot see

hot air circulation	hot air radiation	wood	steam radiation
heat pump	hot water radiation	kerosene heater	electric baseboard

other (specify): _____ 3rd Floor has hot air Circulation

Type of ventilation system (circle all that apply):

(central air conditioning)	mechanical fans	bathroom ventilation fans individual air conditioning units
kitchen range hood fan	outside air intake	

other (specify): _____

2nd + 3rd Floor

Type of fuel utilized (circle all that apply):

(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? *Yes* (*No*)

Is there a whole house fan? *Yes* / (*No*)

Septic system? *Yes* / *Yes (but not used)* / (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*)

Type of ground cover outside of building: grass / concrete / (asphalt) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes* / (*No*)
Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund Site

Other stationary sources nearby (gas stations, emission stacks, etc.): Gas Station 1/2 mile South, Hess Facility 1 mile North

Heavy vehicular traffic nearby (or other mobile sources): River Road (5-lane busy road)

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		

2nd Fl. - None

3rd Fl. - Spray Paint Previously (not sure if still present)

Part V – Miscellaneous Items

Do any occupants of the building smoke? *Yes* / (*No*) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (*No*)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? *Yes* / *No* 3rd Floor - yes, weekly
2nd Floor - NO

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* (*No*)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / (*No*) If yes, when? _____

Has painting or staining been done in the building in the last 6 months? *Yes* / (*No*)

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3591

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See Report Tables

Field ID # Q1 - IA - 42 Field ID # ____ - _____

Field ID # Q1 - IA - 43 Field ID # ____ - _____

Were "Instructions for Occupants" followed? Yes (/ *No*)

If not, describe modifications: No instructions given.

Provide Drawing of Sample Location(s) in Building

See Report Figures

Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) / No

Describe the general weather conditions: Rained all day of 12/17/15 and rained in the morning of 12/18/15.

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

Had to redeploy 01-IA-43 because office was locked when sample needed to be collected. Only the redeployed sample will be analyzed.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/16/15

Preparer's affiliation: CH2M HILL Phone #: (973) 316-3525

Site Name: Quanta Resources EPA ~~Case~~ #: NJD000606442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ Bldg 9. → Formerly Osteo Relief Institute - Non-Surgery, Spine Pain, neuropathy, and joint arthritis therapy.

Property Contact: Danny Daibes (Owner) / Renter / other: ~~N/A~~

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 ____ Children age 13-18 ____ Adults 0 Building is currently vacant.

Part II – Building Characteristics

New Carpet, Paint, renovation in 2012

Building type: residential / multi-family residential / (office) / strip mall / (commercial) / industrial

Describe building: 3 story brick offfice/commercial Year constructed: early 1900s

Sensitive population: day care / nursing home / hospital / school / other (specify): physical therapy office (But No longer in use)

Number of floors below grade: 1 (full basement) / crawl space / slab on grade) some of bldg 9 is above the building 7/8 basement, some is slab on grade

Number of floors at or above grade: 3

Depth of basement below grade surface: 4 ft. ~~Basement~~ footprint size: ~3,200 ft²

Basement floor construction: (concrete) / dirt / floating / stone / other (specify): _____

Foundation walls: (poured concrete) / (cinder blocks) / stone / other (specify) _____

Info on Bldg 7/8

Basement sump present? (Yes) / No Sump pump? (Yes) / No Water in sump? Yes / No Could not see

Type of heating system (circle all that apply):

(hot air circulation) hot air radiation wood steam radiation
heat pump hot water radiation kerosene heater electric baseboard
other (specify): _____ Contained HVAC vents along ceiling

Type of ventilation system (circle all that apply):

(central air conditioning) mechanical fans bathroom ventilation fans individual air conditioning units kitchen range hood fan outside air intake
other (specify): _____

Type of ~~fuel utilized~~ (circle all that apply):

(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? Yes / (No)

Building is vacant so heating/cooling likely not functional.

Is there a whole house fan? *Yes / No*

Septic system? *Yes / Yes (but not used) / (No)*

Irrigation/private well? *Yes / Yes (but not used) / (No)*

Type of ground cover outside of building: ~~(grass)~~ (south) / concrete / (asphalt) (north) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes / (No)* *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes / (No)* Unknown

Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources superfund site

Other stationary sources nearby (gas stations, emission stacks, etc.): Hess facility 1 mile North, gas station 1/2 mile south

Heavy vehicular traffic nearby (or other mobile sources): River Road (5-lane busy road)

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products	Cleaning products laying around	
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery	in Oct. 2013	
New carpeting / flooring	in oct. 2012	NA
Hobbies - glues, paints, etc.		

Building was vacant, left all/most of equipment and office supplies.

Part V – Miscellaneous Items Not occupied

Do any occupants of the building smoke? *Yes* / (*No*) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (*No*)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? *Yes* / (*No*) Not occupied

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (*No*) Not occupied

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / (*No*) If yes, when? _____

Has painting or staining been done in the building in the last 6 months? *Yes* / *No* unknown

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3525

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See report tables

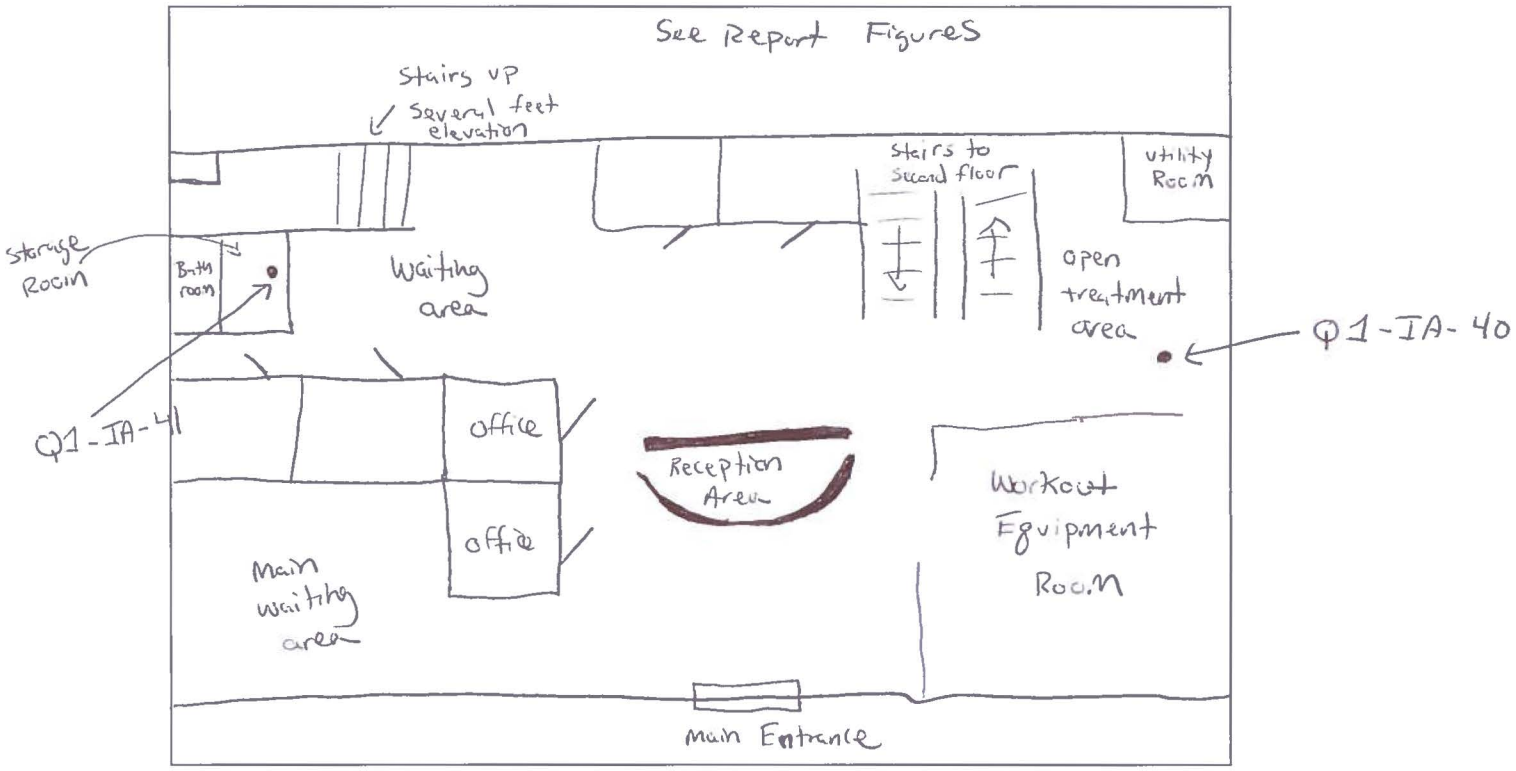
Field ID # Q1 - IA-40 Field ID # ____ - _____

Field ID # Q1 - IA-41 Field ID # ____ - _____

Were "Instructions for Occupants" followed? Yes / (No)

If not, describe modifications: No Instructions given / Not occupied

Provide Drawing of Sample Location(s) in Building



Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) / (No)

Describe the general weather conditions: ~~Rained all day on 12/17, &~~

Weather was Sunny and in 60s

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

This space was vacant/no longer occupied.

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/16/15

Preparer's affiliation: CH2M HILL Phone #: (973) 316-3525

Site Name: Quanta Resources ~~EPA Case~~ #: NJD000606442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ Bldg 10 Basement + Suite 1001 Suite 1003

Property Contact: Danny Daibes (Owner) / Renter / other: _____

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults 0

No occupants in basement.

Part II – Building Characteristics

Building type: residential / multi-family residential / (office) / strip mall / (commercial) / industrial

Describe building: Brick 3 Story Year constructed: Early 1900s

Sensitive population: day care / nursing home / hospital / school / other (specify): None (Suite 1003 Pediatric office)

Number of floors below grade: 1 (full basement) / crawl space / slab on grade)

Number of floors at or above grade: 3

Depth of basement below grade surface: ~4 ft. Basement size: ~4,800 ft²

Basement floor construction: (concrete) / dirt / floating / stone / other (specify): _____

Foundation walls: (poured concrete) / (cinder blocks) / stone / other (specify) _____

Basement sump present? (Yes) / No Sump pump? (Yes) / No Water in sump? Yes / (No)

Type of heating system (circle all that apply): New heater placed in basement after hurricane Sandy.

(hot air circulation) hot air radiation wood steam radiation
heat pump hot water radiation kerosene heater electric baseboard
other (specify): _____

same ducts

Type of ventilation system (circle all that apply): ~~None~~

(central air conditioning) mechanical fans bathroom ventilation fans individual air conditioning units kitchen range hood fan outside air intake
other (specify): _____

Type of fuel utilized (circle all that apply):

(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? Yes / (No)

4 Spaces Sampled in Bldg. 10

1. Unoccupied basement - used for storage, rarely accessed
2. Suite 1001 Yippee Print - 2 to 3 workers, and customers (few at a time)
3. Suite 1003 Pediatric office - 4 workers plus patients
4. Suite 1026 - Clothing making

Is there a whole house fan? *Yes* / (*No*)

Septic system? *Yes* / *Yes (but not used)* / (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*) North & South

Type of ground cover outside of building: grass / concrete / (asphalt) / other (specify) _____

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes* / (*No*)
Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund Site to the North

Other stationary sources nearby (gas stations, emission stacks, etc.): Hess Facility 1 mile N, gas station 1/2 mile S

Heavy vehicular traffic nearby (or other mobile sources): River Road (5-lane busy road) west of bldg.

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents		
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		

Print Shop – Used printers / Ink

Pediatric office – Cleaning supplies / Cleaning Service

musty smell, lots of boxes stored / ~~furniture~~ (wood) / tiles/piping, metal rods (Building Maintenance Materials), wooden boards placed along floor. No Chemicals / cleaners / paint, etc.
wood frams

outside of building

Part V – Miscellaneous Items ~~Not occupied~~

Do any occupants of the building smoke? *Yes* / (No) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (No)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? *Yes* / (No) ~~Not occupied~~ Possibly workers or Patients

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (No) ~~Not occupied~~

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / *No* If yes, when? Unknown

Has painting or staining been done in the building in the last 6 months? *Yes* / (No)

If yes, when _____ and where? _____

Part VI – Sampling Information

Sample Technician: Audrey Stapleton Phone number: (973) 316 - 3525

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room):

Field ID # Q1 - IA-22 Field ID # Q1 - IA-44

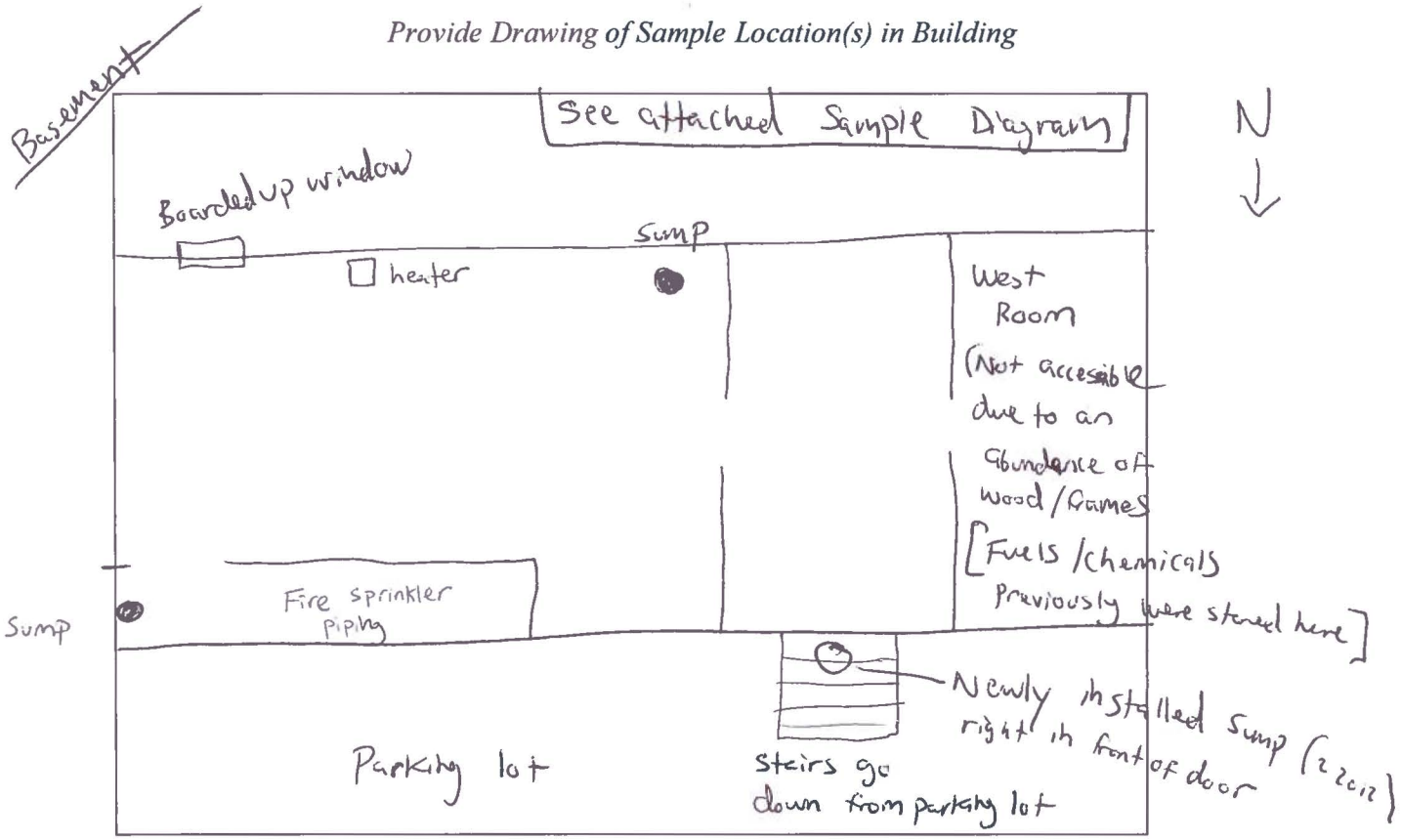
Field ID # Q1 - IA-03 Field ID # Q1 - IA-45

Q1 - IA-46

Were "Instructions for Occupants" followed? *Yes* (No)

If not, describe modifications: No occupants Instructions given

Provide Drawing of Sample Location(s) in Building



Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? (Yes) / ~~No~~

Describe the general weather conditions: Sunny, 60's for most samples, rained all day on 12/17/15

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

Musty smell / moist wooden floor boards / boarded up window

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

New Jersey Department of Environmental Protection

INDOOR AIR BUILDING SURVEY and SAMPLING FORM

Preparer's name: Audrey Stapleton Date: 12/15/15

Preparer's affiliation: CH2M Hill Phone #: 973-316-3591

Site Name: Quanta Resources ~~Case~~ EPA #: NJD000606442

Part I - Occupants

Building Address: 115 River Road, Edgewater, NJ Bldg. 11 (1st Floor)

Property Contact: Danny Daibes (Owner) / Renter / other: _____

Contact's Phone: home ( ) _____ work (201) 840-0050 cell (201) 321-9968

# of Building occupants: Children under age 13 _____ Children age 13-18 _____ Adults _____ → Approximately 1 or 2 workers and 5-10 customers at anytime

Part II – Building Characteristics

Building type: residential / multi-family residential / (office) / strip mall / (commercial) / industrial

Describe building: Brick 3-story/1st Floor used to be a bank Year constructed: Early 1900s

Sensitive population: day care / nursing home / hospital / school / other (specify): None

Number of floors below grade: 0 (full basement / crawl space / (slab on grade))

Number of floors at or above grade: 3

Depth of basement below grade surface: 0 ft. ~~Basement~~ Footprint size: ~3,200 ft²

~~Basement~~ floor construction: (concrete) / dirt / floating / stone / other (specify): _____

Foundation walls: poured concrete / cinder blocks / stone / other (specify) Unknown

~~Basement~~ sump present? *Yes* / (*No*) Sump pump? *Yes* / (*No*) Water in sump? *Yes* / *No*

Type of heating system (circle all that apply): Ceiling Vents

(hot air circulation) hot air radiation wood steam radiation
heat pump hot water radiation kerosene heater electric baseboard
other (specify): _____

Type of ventilation system (circle all that apply): Ceiling Vents

(central air conditioning) mechanical fans bathroom ventilation fans individual air conditioning units kitchen range hood fan outside air intake
other (specify): _____

Type of fuel utilized (circle all that apply):
(Natural gas) / electric / fuel oil / wood / coal / solar / kerosene

Are the basement walls or floor sealed with waterproof paint or epoxy coatings? *Yes* (*No*)

2nd & 3rd Floors are office space
Sampling on 1st Floor only in cross-fit gym

Is there a whole house fan? *Yes* / (*No*)

Septic system? *Yes* / *Yes (but not used)* (*No*)

Irrigation/private well? *Yes* / *Yes (but not used)* / (*No*)

Type of ground cover outside of building: grass / concrete / (asphalt) / other (specify) North, South and west

Existing subsurface depressurization (radon) system in place? *Yes* / (*No*) *active / passive*

Sub-slab vapor/moisture barrier in place? *Yes* / (*No*) unknown

Type of barrier: _____

Part III - Outside Contaminant Sources

NJDEP contaminated site (1000-ft. radius): Quanta Resources Superfund Site to the North

Other stationary sources nearby (gas stations, emission stacks, etc.): Hess facility 1 mile N, Gas station 1/2 miles

Heavy vehicular traffic nearby (or other mobile sources): River Road (5-lane, busy road) to the west

Part IV – Indoor Contaminant Sources

Identify all potential indoor sources found in the building (including attached garages), the location of the source (floor and room), and whether the item was removed from the building 48 hours prior to indoor air sampling event. Any ventilation implemented after removal of the items should be completed at least 24 hours prior to the commencement of the indoor air sampling event.

Potential Sources	Location(s)	Removed (Yes / No / NA)
Gasoline storage cans		
Gas-powered equipment		
Kerosene storage cans		
Paints / thinners / strippers		
Cleaning solvents	liquid soap to clean workout mats / windex	No
Oven cleaners		
Carpet / upholstery cleaners		
Other house cleaning products		
Moth balls		
Polishes / waxes		
Insecticides		
Furniture / floor polish		
Nail polish / polish remover		
Hairspray		
Cologne / perfume		
Air fresheners		
Fuel tank (inside building)		NA
Wood stove or fireplace		NA
New furniture / upholstery		
New carpeting / flooring		NA
Hobbies - glues, paints, etc.		

Interior walls painted 3 months ago (from Dec 2015)

Not inside bldg, people smoke in parking lots on N+S side

Part V – Miscellaneous Items

Do any occupants of the building smoke? *Yes* / (*No*) How often? _____

Last time someone smoked in the building? _____ hours / *days* *ago*

Does the building have an attached garage directly connected to living space? *Yes* / (*No*)

If so, is a car usually parked in the garage? *Yes* / *No*

Are gas-powered equipment or cans of gasoline/fuels stored in the garage? *Yes* / *No*

Do the occupants of the building have their clothes dry cleaned? *Yes* / (*No*)

If yes, how often? weekly / monthly / 3-4 times a year

Do any of the occupants use solvents in work? *Yes* / (*No*)

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? *Yes* / *No*

Have any pesticides/herbicides been applied around the building or in the yard? *Yes* / (No)

If so, when and which chemicals? _____

Has there ever been a fire in the building? *Yes* / (*No*) If yes, when? UNKNOWN

Has painting or staining been done in the building in the last 6 months? (*Yes*) / *No*

If yes, when 3 months ago from (Dec. 2015) and where? Interior walls of crossfit Gym

Part VI – Sampling Information

Sample Technician: Audrey Stapleton / Taylor Salsburg Phone number: (973) 316 - 3591

Sample Source: (Indoor Air) / Sub-Slab / Near Slab Soil Gas / Exterior Soil Gas

Sampler Type: Tedlar bag / Sorbent / (Stainless Steel Canister) / Other (specify): _____

Analytical Method: (TO-15) SIM / TO-17 / other: _____ Cert. Laboratory: ALS Environmental

Sample locations (floor, room): See report tables

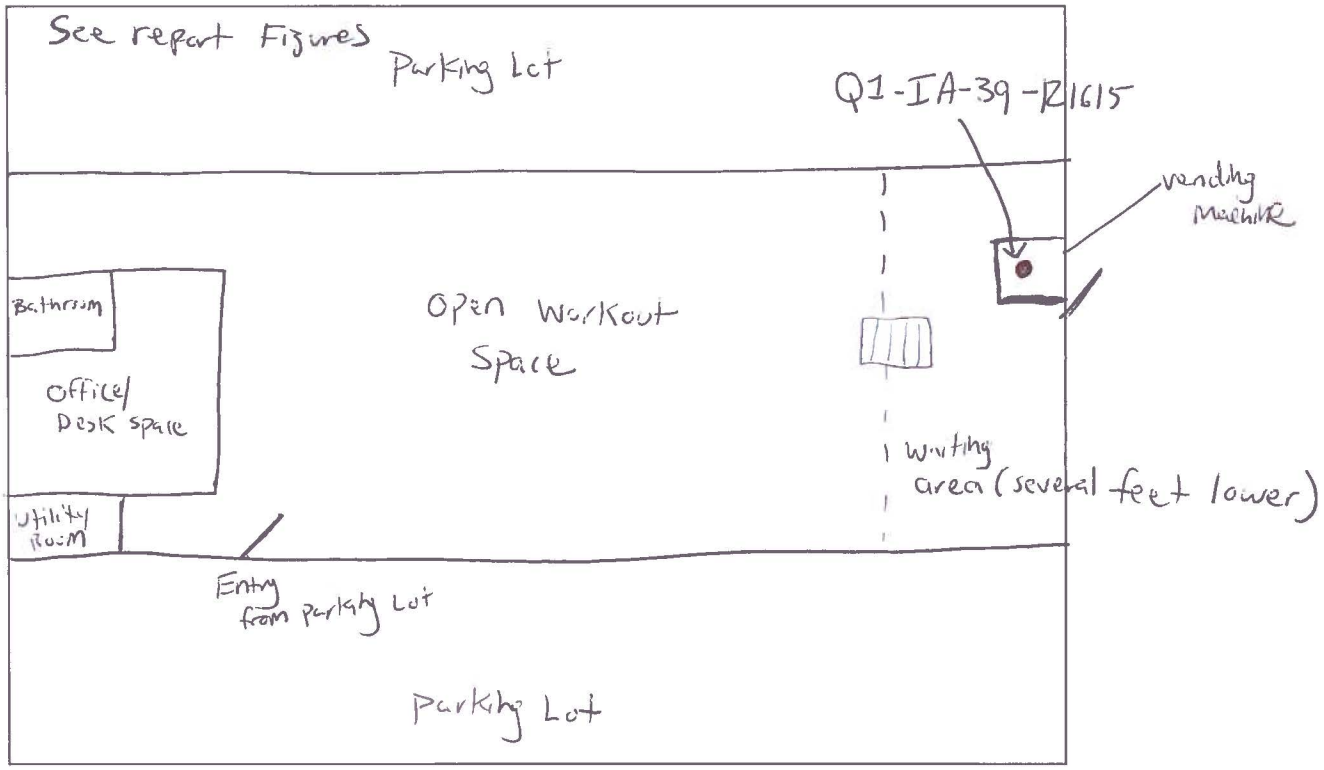
Field ID # Q1 - IA-39-121615 Field ID # _____ - _____

Field ID # _____ - _____ Field ID # _____ - _____

Were "Instructions for Occupants" followed? Yes (*No*)

If not, describe modifications: No Instructions Given

Provide Drawing of Sample Location(s) in Building



Part VII - Meteorological Conditions

Was there significant precipitation within 12 hours prior to (or during) the sampling event? *Yes* (*No*)

Describe the general weather conditions: Sunny, slightly windy, ~ 55°

Part VIII – General Observations

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process.

1st Floor space is a large interior air space, all connected, only closing door is to the bathroom

(NJDEP 1997; NHDES 1998; VDOH 1993; MassDEP 2002; NYSDOH 2005; CalEPA 2005)

Appendix D
Chain-of-Custody Forms

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER.
INSTRUCTIONS ON THE BACK.

COC #: | of

ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT
[X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-TAT subject to ALSI approval and surcharges.

Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name:
Title:
Custody Sealed Date/Time:
Date Shipped to Client:
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?			
Labels Complete/Accurate?			
Cont. in Good Cond.?			
Custody Seals Present?			
(if present) Seals Intact?			
Returned in ≤ 15 days?			

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15 | TO-15 FIELD DATA | LABORATORY RECORD

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-Indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Setpoint (mL/min)
1	Q2-IA-01-121515	IA	12/15/15	14:09	15:26		6L	AC00580	FCR00017	29.97	5.93				
2	Q2-IA-02-121515	IA	12/15/15	14:12	15:23		6L	AC00714	FCR00003	29.96	2.27				
3	Q2-IA-03-121515	IA	12/15/15	14:15	15:27		6L	AC01884	FCR00016	29.89	4.47				
4	Q2-DUP1-121515	IA	12/15/15	14:15	15:27		6L	AS00605	FCR00028	29.97	12.1				
5	Q2-OA-01-121515	OUTDOOR	12/15/15	14:21	15:21		6L	AC02026	FCR00011	29.94	5.02				
6	Q2-OA-02-121515	OUTDOOR	12/15/15	14:18	13:50		6L	AS00751	SFC00034	29.94	3.77				
7	Q2-VI-01-121515	SS	12/15/15	15:30	13:42		6L	AS00862	FCA00427	29.94	5.95				
8	Q2-VI-02-121515	SS	12/15/15	13:51	15:25		6L	AC01493	FCA00404	29.94	3.31				
9							6L								
10							6L								

5. SAMPLED BY (Please Print):

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Taylor Salsburg/CH2M		7:00	2		
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables
[ ] Standard [ ] CLP-like
[ ] DOD [X] TO-15
[ ] Other NJDEP requirements
EDDs-Type:

ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In
[ ] NY
[X] NJ
[ ] PA
[ ] NC
[ ] other

Phone: 1-717-944-5541
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
Rev 03Mar2011

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER.
INSTRUCTIONS ON THE BACK.

COC #: | of

ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT
[X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-TAT subject to ALSI approval and surcharges.

Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name:
Title:
Custody Sealed Date/Time:
Date Shipped to Client:
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?			
Labels Complete/Accurate?			
Cont. in Good Cond.?			
Custody Seals Present?			
(if present) Seals Intact?			
Returned in ≤ 15 days?			

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15 | TO-15 FIELD DATA | LABORATORY RECORD

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-Indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Setpoint (mL/min)
1	Q1-IA-32-121715	IA	12/17/15	14:26	14:28		6L	AS00744	SFC00018	30.13	8.14				
2	Q1-IA-13-121715	IA	12/17/15	14:50	16:36		6L	AS00658	SFC00059	30.11	14.16				
3	Q1-IA-35-121715	IA	12/17/15	13:36	13:53		6L	AS00791	SFC00064	28.75	3.36				
4	Q1-IA-28-121715	IA	12/17/15	13:27	13:46		6L	AC01096	EFC00008	30.12	6.3				
5	Q1-IA-37-121615	IA	12/16/15	14:31	16:17		6L	AC01200	EFC00007	29.59	7.3				
6	Q1-IA-21-121615	IA	12/16/15	14:41	15:07		6L	AS00781	EFC00009	29.55	6.75				
7	Q1-IA-23-121615	IA	12/16/15	14:43	15:05		6L	AC01100	EFC00003	29.57	4.51				
8	Q1-IA-24-121615	IA	12/16/15	14:37	14:10		6L	AS00710	SFC00043	29.55	8.58				
9	Q1-IA-25-121615	IA	12/16/15	14:36	15:08		6L	AC01366	EFC00005	29.49	8.17				
10	Q1-IA-42-121615	IA	12/16/15	14:07	13:23		6L	AC02014	EFC00002	29.53	8.89				

5. SAMPLED BY (Please Print):

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Taylor Salsburg/CH2M		14:00	2		
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables
[ ] Standard [ ] CLP-like
[ ] DOD [X] TO-15
[ ] Other NJDEP requirements
EDDs-Type:

ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In
[ ] NY
[X] NJ
[ ] PA
[ ] NC
[ ] other

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AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

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INSTRUCTIONS ON THE BACK.

COC #: | of

ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT
[X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-TAT subject to ALSI approval and surcharges.

Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name:
Title:
Custody Sealed Date/Time:
Date Shipped to Client:
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?			
Labels Complete/Accurate?			
Cont. in Good Cond.?			
Custody Seals Present?			
(if present) Seals Intact?			
Returned in ≤ 15 days?			

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15 | TO-15 FIELD DATA | LABORATORY RECORD

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-Indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Setpoint (mL/min)
1	Q1-IA-40-121615	IA	12/16/15	13:33	14:00		6L	AC01987	SFC00063	29.56	4.62				
2	Q1-IA-41-121615	IA	12/16/15	13:34	13:58		6L	AS00571	SFC00026	29.52	4.67				
3	Q1-IA-22-121615	IA	12/16/15	14:19	15:17		6L	AS00623	SFC00031	29.52	5.8				
4	Q1-IA-03-121615	IA	12/16/15	14:21	15:18		6L	AS00868	SFC00027	29.39	5.24				
5	Q1-IA-44-121615	IA	12/16/15	14:48	15:13		6L	AS00640	SFC00005	29.53	5.71				
6	Q1-IA-45-121615	IA	12/16/15	14:49	15:15		6L	AC01362	SFC00048	29.54	5.93				
7	Q1-IA-39-121615	IA	12/16/15	13:24	14:04		6L	AS00338	SFC00038	29.5	5.03				
8	Q1-CS-01-121715	IA	12/17/15	13:35	13:39		6L	AC02064	SFC00033	30.05	7.2				
9	Q1-CS-04-121715	IA	12/17/15	15:55	14:04		6L	AS00514	SFC00045	30.07	6.4				
10	Q1-CS-05-121715	IA	12/17/15	16:00	14:03		6L	AS00754	FCR00036	30.07	8.12				

5. SAMPLED BY (Please Print):

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Taylor Salsburg/CH2M		14:00	2		
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables:
[ ] Standard [ ] CLP-like
[ ] DOD [X] TO-15
[ ] Other NJDEP Req.
EDDs-Type:

ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In:
[ ] NY
[X] NJ
[ ] PA
[ ] NC
[ ] other

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Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
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Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name:
Title:
Custody Sealed Date/Time:
Date Shipped to Client:
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?			
Labels Complete/Accurate?			
Cont. in Good Cond.?			
Custody Seals Present?			
(if present) Seals Intact?			
Returned in ≤ 15 days?			

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15 / TO-15 FIELD DATA / LABORATORY RECORD

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-Indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Setpoint (mL/min)
1	Q1-CS-07-121715	IA	12/17/15	15:45	14:02		6L	AC02108	FCR00010	30.01	7.5				
2	Q1-OA-03-121615	OUTDOOR	12/16/15	15:02	15:31		6L	AC00686	SFC00011	29.48	6.03				
3	Q1-OA-06-121615	OUTDOOR	12/16/15	15:11	15:34		6L	AC01411	EFC00023	29.52	5.21				
4	Q1-OA-09-121715	OUTDOOR	12/17/15	16:05	16:29		6L	AS00712	FCR00038	30.14	4.37				
5	Q1-OA-10-121715	OUTDOOR	12/17/15	16:10	16:32		6L	AC01775	FCR00004	30.16	1.93				
6	Q1-DUP1-121615	IA	12/16/15	14:37	14:10		6L	AC01764	EFC00019	28.7	3.75				
7	Q1-DUP2-121715	IA	12/17/15	13:35	13:39		6L	AC00982	SFC00006	29.46	4.53				
8	Q1-DUP3-121715	IA	12/17/15	14:50	16:36		6L	AC01235	FCR00069	30.16	5.55				
9	Q1-IA-46-121715	IA	12/17/15	15:05	15:20		6L	AS00487	FCR00070	30.16	4.54				
10	Q1-IA-36-121715	IA	12/17/15	13:24	13:35		6L	AS00770	FCR00020	30.12	6.6				

5. SAMPLED BY (Please Print):

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Taylor Salsburg/CH2M		14:00	2		
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables
[ ] Standard [ ] CLP-like
[ ] DOD [X] TO-15
[ ] Other NJDEP Req.
EDDs-Type:

ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In
[ ] NY
[X] NJ
[ ] PA
[ ] NC
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Date Required: Approved By:

Email? X -Y kyle.block@ch2m.com
Fax? -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
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3	SIM			
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5	SIM			
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8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name:
Title:
Custody Sealed Date/Time:
Date Shipped to Client:
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?			
Labels Complete/Accurate?			
Cont. in Good Cond.?			
Custody Seals Present?			
(if present) Seals Intact?			
Returned in ≤ 15 days?			

Custody Seal #(s):
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4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15 | TO-15 FIELD DATA | LABORATORY RECORD

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-Indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Setpoint (mL/min)
1	Q1-IA-43-121815	IA	12/18/15	13:15	13:27		6L	AS00830	FCR00068	29.92	5.56				
2	Q3-IA-01-121815	IA	12/18/15	12:38	13:03		6L	AS00243	FCR00044	29.9	4.9				
3	Q3-IA-02-121815	IA	12/18/15	12:39	12:44		6L	AS00779	FCR00059	29.98	5.94				
4	Q3-IA-03-121815	IA	12/18/15	12:40	13:00		6L	AS00168	FCP00001	29.96	5.55				
5	Q3-IA-04-121815	IA	12/18/15	12:36	13:01		6L	AC02009	FCR00013	29.99	4.6				
6	Q3-OA-01-121815	OUTDOOR	12/18/15	12:41	21:47		6L	AS00327	FCR00049	29.99	4.64				
7	Q3-OA-02-121815	OUTDOOR	12/18/15	12:40	12:46		6L	AS00820	FCR00025	29.89	4.1				
8	Q3-VI-03-121815	SS	12/18/15	15:10	15:40		6L	AC00998	AVG04234	29.91	5.03				
9	Q3-VI-02-121815	SS	12/18/15	16:17	16:28		6L	AS00725	AVG04528	29.93	7.21				
10	Q3-VI-01-121815	SS	12/18/15	15:47	15:53		6L	AC01578	FCA00500	29.96	4.1				

5. SAMPLED BY (Please Print):

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REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Taylor Salsburg/CH2M		10:00	2		
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables:
☐ Standard ☐ CLP-like
☐ DOD ☒ TO-15
☐ Other NJDEP requirements
EDDs-Type:

ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In:
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Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

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1	SIM			
2	SIM			
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4	SIM			
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3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name:
Title:
Custody Sealed Date/Time:
Date Shipped to Client:
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?			
Labels Complete/Accurate?			
Cont. in Good Cond.?			
Custody Seals Present?			
(if present) Seals Intact?			
Returned in ≤ 15 days?			

Custody Seal #(s):

Courier/Tracking #:

4. FIELD DATA SHEET

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-Indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Setpoint (mL/min)
1	Q3-DUP1-121815	SS	12/18/15	15:10	15:40		6L	AC01424	FCA00632	29.93	5.57				
2			12/18/15				6L								
3			12/18/15				6L								
4			12/18/15				6L								
5			12/18/15				6L								
6			12/18/15				6L								
7			12/18/15				6L								
8			12/18/15				6L								
9			12/18/15				6L								
10			12/18/15				6L								

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Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Taylor Salsburg/CH2M		10:00	2		
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables
[ ] Standard [ ] CLP-like
[ ] DOD [X] TO-15
[ ] Other NJDEP requirements
EDDs-Type:

ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In
[ ] NY
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Phone: 1-717-944-5541

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Appendix E
Data Quality Evaluation Reports

Honeywell Quanta Resources Superfund Site
163 Old River Road Vapor Intrusion Monitoring
December 2015
Data Quality Evaluation Report

Introduction

The objective of this data quality evaluation (DQE) report is to assess the data quality of analytical results for vapor intrusion samples collected at the Honeywell Quanta Resources Superfund Site. Individual method requirements, guidelines from the *UFP-Quality Assurance Project Plan for Vapor Intrusion, Quanta Resources Corporation Superfund Site, OU1, Edgewater, New Jersey* (September 2013) (QAPP) and the USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (June, 2008) were used in this assessment. This report is intended as a general data quality assessment designed to summarize data issues.

Analytical Data

This DQE report covers three normal indoor air samples, two normal outdoor air samples; two normal sub slab soil gas samples and one indoor air field duplicate (FD). A list of samples and collection dates is included in Attachment A at the end of this report. These sample results were reported under one sample delivery group, P1505463. Samples were collected on December 15, 2015. The samples were analyzed for volatile organic compounds by Method TO-15SIM. The analyses were performed by ALS Environmental in Simi Valley, California (ALS). Samples were collected and shipped overnight to the laboratory.

The assessment of data included a review of: (1) the chain-of-custody (CoC) documentation; (2) holding-time compliance; (3) the required field and laboratory quality control (QC) samples; (4) flagging for method blanks; (5) laboratory control samples (LCS); (6) surrogate spike recoveries; (7) internal standard recoveries; (8) initial and continuing calibrations; and, (9) laboratory duplicates.

Field samples were also reviewed to ascertain field compliance and data quality issues. This included the review of one FD set.

Data flags are assigned according to the QAPP. These flags, as well as the reason for each flag, are entered into the electronic database. Multiple flags are routinely applied to specific sample method/matrix/analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied validation flags. The final flag also includes blank sample impacts.

The data flags are those listed in the QAPP and are defined below:

- J = Analyte was present but reported value may not be accurate or precise.
- R = Analyte was rejected.
- U = Analyte was analyzed for but not detected at the specified detection limit.

- UJ = Analyte was not detected above the detection limit objective. However, the reported detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

Findings

The overall summaries of the data validation findings are contained in the following sections below and summarized in Attachment B at the end of this DQE report.

Holding Times

All holding-time criteria were met.

Calibration

All initial and continuing calibration criteria were met.

Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination.

Field Duplicates

One FD set was collected with this dataset. The FD and associated parent sample identifications (ID) are included below.

Table 1 – List of Field Duplicates

Field Duplicate Sample ID	Associated Parent Sample ID
Q2-DUP1-121515	Q2-IA-03-121515

All relative percent difference (RPD) criteria were met with the following exceptions:

The RPDs of naphthalene and benzene were above the acceptance criterion in the FD set. Four associated detected results in the FD set were qualified as estimated and flagged "J".

Internal Standards

All internal standard criteria were met.

Laboratory Control Samples

Laboratory control samples were analyzed as required and all accuracy criteria were met.

Laboratory Duplicates

All laboratory duplicate precision criteria were met.

Chain of Custody

Each sample was documented in a completed chain-of-custody and received at the laboratory in good condition. Canister pressures were acceptable.

Overall Assessment

The final activity in the data quality evaluation is an assessment of whether the data meets the data quality objectives (DQO). The goal of this assessment is to demonstrate that a sufficient number of representative samples were collected and the resulting analytical data can be used to support the decisionmaking process. The following summary highlights the data evaluation findings for the above defined events:

1. No data were rejected and completeness was 100 percent.
2. No data were qualified because of low-level blank contamination.
3. FD RPD exceedances were observed; four results were qualified as estimated.
4. The precision and accuracy of the data, as measured by laboratory QC indicators, suggest that the DQOs were met.

Attachment A – Samples Associated with DQE

Field Sample ID	Sample Date	Sample Purpose
Q2-IA-01-121515	12/15/2015	REG
Q2-IA-02-121515	12/15/2015	REG
Q2-IA-03-121515	12/15/2015	REG
Q2-OA-01-121515	12/15/2015	REG
Q2-OA-02-121515	12/15/2015	REG
Q2-VI-01-121515	12/15/2015	REG
Q2-VI-02-121515	12/15/2015	REG
Q2-DUP1-121515	12/15/2015	FD

Notes:
FD = field duplicate
REG = regular sample

Attachment B – Validation Findings

Method	Field Sample ID	Analyte	Final Result	Lab Units	Final Flag	Reason Code
TO-15-SIM	Q2-DUP1-121515	Benzene	1.5	µg/m^3	J	FD
TO-15-SIM	Q2-IA-03-121515	Benzene	0.63	µg/m^3	J	FD
TO-15-SIM	Q2-DUP1-121515	Naphthalene	0.53	µg/m^3	J	FD
TO-15-SIM	Q2-IA-03-121515	Naphthalene	1.7	µg/m^3	J	FD

Notes:
FD = Field duplicate relative percent difference criterion exceeded.

P1505463

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1. CLIENT INFORMATION

Client Name/Address: CHZM. BOSTON, MA
18 TREMONT ST SUITE 700
Contact: KYLE BLOCK
Phone#: 617-626-7013
Project Name/#: QUANTA RESOURCES
Bill To: 6168236.HW.20.23.RR
TAT: [✓] Normal-Standard TAT is 10-12 business days. [ ] Rush-TAT subject to ALSI approval and surcharges.
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7	✓			SIM
8	✓			SIM
9	✓			SIM
10	✓			SIM

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:
CANISTERS PREPARED BY:
Name: Maira Lopez
Title: Laboratory Technician
Custody Sealed Date/Time:
Date Shipped to Client: 12/8/2015
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?	✓		AD
Labels Complete/Accurate?	✓		AD
Cont. in Good Cond.?	✓		AD
Custody Seals Present?		✓	AD
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1	Q2-VI-Ø1-121515	SS	12/15/15	1538	1342			✓	AS00862	FCA00427	29.94	5.95	12011520	29.1	-2.66	3.5
2	Q2-OA-Ø2-121515	OUTDOOR		1418	1350			✓	AS00751	SFC00034	29.94	3.77	12041514	29.1	-1.58	3.5
3	Q2-OA-Ø1-121515	OUTDOOR		1421	1521			✓	AC02026	FCR00011	29.94	5.02	12041515	29.1	-2.70	3.5
4	Q2-IA-Ø2-121515	IA		1412	1523			✓	AC00714	FCR00003	29.96	2.27	12051519	29.1	-0.80	3.5
5	Q2-VI-Ø2-121515	SS		1401	1525			✓	AC01493	FCA00404	29.94	3.31	12041518	29.1	-1.37	3.5
6	Q2-IA-Ø1-121515	IA		1409	1526			✓	AC00580	FCR00017	29.97	5.93	12051527	29.1	-2.68	3.5
7	Q2-IA-Ø3-121515	IA		1415	1527			✓	AC01884	FCR00016	29.89	4.47	12011529	29.1	-1.96	3.5
8	Q2-DUP1-121515	IA	↓	1415	1527			✓	AS00605	FCR00029	29.97	12.10	12051518	29.1	-5.69	3.5
9																
10																

Page 2 of 2

5. SAMPLED BY (Please Print): TAYLOR SALSBURG
LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 TAYLOR SALSBURG/ CHZM	12/15/15	1800	2 FEDEX		
3			4	12/16/15	0755
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables: [ ] Standard [ ] CLP-like [ ] DOD [ ] TO-15 [ ] Other
EDDs-Type:
ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ] other

Phone: 1-717-944-5541
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
Rev 03Mar2011

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-VI-01-121515** ALS Project ID: P1505463
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR** ALS Sample ID: P1505463-001

Test Code: EPA TO-15 SIM Date Collected: 12/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/16/15
Analyst: Wida Ang Date Analyzed: 12/18/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00862

Initial Pressure (psig): -2.66 Final Pressure (psig): 3.63

Canister Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene	**0.31**	0.15	0.030	**0.096**	0.048	0.0095	**B**
79-01-6	Trichloroethene	**0.068**	0.15	0.013	**0.013**	0.028	0.0024	**J**
100-41-4	Ethylbenzene	**1.2**	0.76	0.015	**0.27**	0.18	0.0034	
179601-23-1	m,p-Xylenes	**4.6**	0.76	0.029	**1.1**	0.18	0.0067	
95-47-6	o-Xylene	**1.6**	0.76	0.014	**0.36**	0.18	0.0031	
108-67-8	1,3,5-Trimethylbenzene	**0.85**	0.76	0.011	**0.17**	0.15	0.0023	
95-63-6	1,2,4-Trimethylbenzene	**3.4**	0.76	0.013	**0.70**	0.15	0.0026	
91-20-3	Naphthalene	**0.59**	0.038	0.024	**0.11**	0.0073	0.0046	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-OA-02-121515** ALS Project ID: P1505463
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR** ALS Sample ID: P1505463-002

Test Code: EPA TO-15 SIM Date Collected: 12/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/16/15
Analyst: Wida Ang Date Analyzed: 12/18/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00751

Initial Pressure (psig): -1.58 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene	**0.61**	0.14	0.028	**0.19**	0.044	0.0088	**B**
79-01-6	Trichloroethene	**0.027**	0.14	0.012	**0.0051**	0.026	0.0022	**J**
100-41-4	Ethylbenzene	**0.28**	0.70	0.014	**0.063**	0.16	0.0031	**J**
179601-23-1	m,p-Xylenes	**0.93**	0.70	0.027	**0.21**	0.16	0.0061	
95-47-6	o-Xylene	**0.31**	0.70	0.012	**0.072**	0.16	0.0029	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.093**	0.70	0.010	**0.019**	0.14	0.0021	**J**
95-63-6	1,2,4-Trimethylbenzene	**0.32**	0.70	0.012	**0.066**	0.14	0.0024	**J**
91-20-3	Naphthalene	**0.17**	0.035	0.022	**0.033**	0.0067	0.0043	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-OA-01-121515** ALS Project ID: P1505463
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR** ALS Sample ID: P1505463-003

Test Code: EPA TO-15 SIM Date Collected: 12/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/16/15
Analyst: Wida Ang Date Analyzed: 12/18/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02026

Initial Pressure (psig): -2.17 Final Pressure (psig): 4.00

Canister Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene	**0.55**	0.15	0.030	**0.17**	0.047	0.0093	**B**
79-01-6	Trichloroethene	**0.024**	0.15	0.013	**0.0044**	0.028	0.0024	**J**
100-41-4	Ethylbenzene	**0.23**	0.75	0.014	**0.053**	0.17	0.0033	**J**
179601-23-1	m,p-Xylenes	**0.78**	0.75	0.028	**0.18**	0.17	0.0065	
95-47-6	o-Xylene	**0.28**	0.75	0.013	**0.063**	0.17	0.0031	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.079**	0.75	0.011	**0.016**	0.15	0.0022	**J**
95-63-6	1,2,4-Trimethylbenzene	**0.29**	0.75	0.012	**0.059**	0.15	0.0025	**J**
91-20-3	Naphthalene	**0.17**	0.037	0.024	**0.033**	0.0071	0.0045	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-IA-02-121515** ALS Project ID: P1505463
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR** ALS Sample ID: P1505463-004

Test Code: EPA TO-15 SIM Date Collected: 12/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/16/15
Analyst: Wida Ang Date Analyzed: 12/18/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00714
Initial Pressure (psig): -0.80 Final Pressure (psig): 3.75

Canister Dilution Factor: 1.33

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene	**0.64**	0.13	0.027	**0.20**	0.042	0.0083	**B**
79-01-6	Trichloroethene	**0.035**	0.13	0.011	**0.0066**	0.025	0.0021	**J**
100-41-4	Ethylbenzene	**0.36**	0.67	0.013	**0.082**	0.15	0.0030	**J**
179601-23-1	m,p-Xylenes	**1.2**	0.67	0.025	**0.28**	0.15	0.0058	
95-47-6	o-Xylene	**0.42**	0.67	0.012	**0.098**	0.15	0.0027	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.14**	0.67	0.0097	**0.028**	0.14	0.0020	**J**
95-63-6	1,2,4-Trimethylbenzene	**0.48**	0.67	0.011	**0.098**	0.14	0.0022	**J**
91-20-3	Naphthalene	**0.28**	0.033	0.021	**0.054**	0.0063	0.0041	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-VI-02-121515** ALS Project ID: P1505463
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR** ALS Sample ID: P1505463-005

Test Code: EPA TO-15 SIM Date Collected: 12/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/16/15
Analyst: Wida Ang Date Analyzed: 12/18/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01493
Initial Pressure (psig): -1.37 Final Pressure (psig): 3.72

Canister Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene	**0.34**	0.14	0.028	**0.11**	0.043	0.0086	**B**
79-01-6	Trichloroethene	**0.075**	0.14	0.012	**0.014**	0.026	0.0022	**J**
100-41-4	Ethylbenzene	**11**	0.69	0.013	**2.5**	0.16	0.0031	
179601-23-1	m,p-Xylenes	**18**	0.69	0.026	**4.1**	0.16	0.0060	
95-47-6	o-Xylene	**17**	0.69	0.012	**3.8**	0.16	0.0028	
108-67-8	1,3,5-Trimethylbenzene	**3.6**	0.69	0.010	**0.73**	0.14	0.0021	
95-63-6	1,2,4-Trimethylbenzene	**7.9**	0.69	0.011	**1.6**	0.14	0.0023	
91-20-3	Naphthalene	**0.73**	0.035	0.022	**0.14**	0.0066	0.0042	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-IA-01-121515** ALS Project ID: P1505463
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR** ALS Sample ID: P1505463-006

Test Code: EPA TO-15 SIM Date Collected: 12/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/16/15
Analyst: Wida Ang Date Analyzed: 12/18/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00580

Initial Pressure (psig): -2.68 Final Pressure (psig): 3.80

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene	**0.66**	0.15	0.031	**0.21**	0.048	0.0096	**B**
79-01-6	Trichloroethene	**0.035**	0.15	0.013	**0.0066**	0.029	0.0024	**J**
100-41-4	Ethylbenzene	**0.83**	0.77	0.015	**0.19**	0.18	0.0034	
179601-23-1	m,p-Xylenes	**2.1**	0.77	0.029	**0.49**	0.18	0.0067	
95-47-6	o-Xylene	**0.81**	0.77	0.014	**0.19**	0.18	0.0032	
108-67-8	1,3,5-Trimethylbenzene	**0.24**	0.77	0.011	**0.049**	0.16	0.0023	**J**
95-63-6	1,2,4-Trimethylbenzene	**0.69**	0.77	0.013	**0.14**	0.16	0.0026	**J**
91-20-3	Naphthalene	**0.70**	0.039	0.025	**0.13**	0.0073	0.0047	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-IA-03-121515**
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR**

ALS Project ID: P1505463
ALS Sample ID: P1505463-007

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: AC01884

Date Collected: 12/15/15
Date Received: 12/16/15
Date Analyzed: 12/18/15
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.96 Final Pressure (psig): 3.66

Canister Dilution Factor: 1.44

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier	Val Q	Reason Code
71-43-2	Benzene	**0.63**	0.14	0.029	**0.20**	0.045	0.0090	**B**	J	FD
79-01-6	Trichloroethene	**0.043**	0.14	0.012	**0.0080**	0.027	0.0023	**J**		
100-41-4	Ethylbenzene	**0.68**	0.72	0.014	**0.16**	0.17	0.0032	**J**		
179601-23-1	m,p-Xylenes	**2.1**	0.72	0.027	**0.48**	0.17	0.0063			
95-47-6	o-Xylene	**0.74**	0.72	0.013	**0.17**	0.17	0.0030			
108-67-8	1,3,5-Trimethylbenzene	**0.29**	0.72	0.011	**0.058**	0.15	0.0021	**J**		
95-63-6	1,2,4-Trimethylbenzene	**0.83**	0.72	0.012	**0.17**	0.15	0.0024			
91-20-3	Naphthalene	**1.7**	0.036	0.023	**0.32**	0.0069	0.0044		J	FD

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q2-DUP1-121515** ALS Project ID: P1505463
Client Project ID: **QUANTA RESOURCES / 668236.HW.20.23.RR** ALS Sample ID: P1505463-008

Test Code: EPA TO-15 SIM Date Collected: 12/15/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/16/15
Analyst: Wida Ang Date Analyzed: 12/18/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00605

Initial Pressure (psig): -5.69 Final Pressure (psig): 3.76
Initial Pressure 2 (psig): -0.09 Final Pressure 2 (psig): 5.15

Canister Dilution Factor: 2.78

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier	Val Q	Reason Code
71-43-2	Benzene	**1.5**	0.28	0.056	**0.46**	0.087	0.017	**B**	J	FD
79-01-6	Trichloroethene	**0.048**	0.28	0.024	**0.0090**	0.052	0.0044	**J**		
100-41-4	Ethylbenzene	**0.73**	1.4	0.027	**0.17**	0.32	0.0062	**J**		
179601-23-1	m,p-Xylenes	**2.2**	1.4	0.053	**0.51**	0.32	0.012			
95-47-6	o-Xylene	**0.76**	1.4	0.025	**0.17**	0.32	0.0057	**J**		
108-67-8	1,3,5-Trimethylbenzene	**0.23**	1.4	0.020	**0.046**	0.28	0.0041	**J**		
95-63-6	1,2,4-Trimethylbenzene	**0.58**	1.4	0.023	**0.12**	0.28	0.0047	**J**		
91-20-3	Naphthalene	**0.53**	0.070	0.044	**0.10**	0.013	0.0085		J	FD

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

Honeywell Quanta Resources Superfund Site
103 River Road Vapor Intrusion Monitoring
December 2015
Data Quality Evaluation Report

Introduction

The objective of this data quality evaluation (DQE) report is to assess the data quality of analytical results for vapor intrusion samples collected at the Honeywell Quanta Resources Superfund Site. Individual method requirements, guidelines from the *UFP-Quality Assurance Project Plan for Vapor Intrusion, Quanta Resources Corporation Superfund Site, OU1, Edgewater, New Jersey* (September 2013) (QAPP) and the USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (June, 2008) were used in this assessment. This report is intended as a general data quality assessment designed to summarize data issues.

Analytical Data

This DQE report covers four normal indoor air samples, two normal outdoor air samples, three normal sub slab soil gas sample and one indoor air field duplicate (FD). A list of samples and collection dates is included in Attachment A at the end of this report. These sample results were reported under one sample delivery group, P1505594B. Samples were collected December 18, 2015. The samples were analyzed for volatile organic compounds by Method TO-15SIM. The analyses were performed by ALS Environmental in Simi Valley, California. Samples were collected and shipped overnight to the laboratory.

The assessment of data included a review of: (1) the chain-of-custody (CoC) documentation; (2) holding-time compliance; (3) the required field and laboratory quality control (QC) samples; (4) flagging for method blanks; (5) laboratory control samples (LCS); (6) surrogate spike recoveries; (7) internal standard recoveries; (8) initial and continuing calibrations; and, (9) laboratory duplicates.

Field samples were also reviewed to ascertain field compliance and data quality issues. This included the review of one FD set.

Data flags are assigned according to the QAPP. These flags, as well as the reason for each flag, are entered into the electronic database. Multiple flags are routinely applied to specific sample method/matrix/analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied validation flags. The final flag also includes blank sample impacts.

The data flags are those listed in the QAPP and are defined below:

- J = Analyte was present but reported value may not be accurate or precise.
- R = Analyte was rejected.
- U = Analyte was analyzed for but not detected at the specified detection limit.

- UJ = Analyte was not detected above the detection limit objective. However, the reported detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

Findings

The overall summaries of the data validation findings are contained in the following sections below and summarized in Attachment B at the end of this DQE report.

Holding Times

All holding-time criteria were met.

Calibration

All initial and continuing calibration criteria were met.

Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination.

Field Duplicates

One FD set was collected with this dataset. The FD and associated parent sample identifications (ID) are included below.

Table 1 – List of Field Duplicates

Field Duplicate Sample ID	Associated Parent Sample ID
Q1-DUP1-121615	Q1-IA-24-121615

All relative percent difference criteria were met.

Internal Standards

All internal standard criteria were met.

Laboratory Control Samples

Laboratory control samples were analyzed as required. All acceptance criteria were met with following exception:

The recovery of naphthalene was below the lower control limit in a LCS, indicating the associated sample results are possibly biased low. Ten associated detected results were qualified as estimated and flagged "J".

Laboratory Duplicates

A laboratory duplicate was not analyzed on a sample from 103 River Road, but batch laboratory duplicate precision was acceptable.

Chain of Custody

Each sample was documented in a completed chain-of-custody and received at the laboratory in good condition. Canister pressures were acceptable.

Overall Assessment

The final activity in the data quality evaluation is an assessment of whether the data meets the data quality objectives (DQO). The goal of this assessment is to demonstrate that a sufficient number of representative samples were collected and the resulting analytical data can be used to support the decisionmaking process. The following summary highlights the data evaluation findings for the above defined events:

1. No data were rejected and completeness was 100 percent.
2. No data were qualified because of low-level blank contamination.
3. A LCS recovery exceedance was observed; 10 results were qualified as estimated.
4. The precision and accuracy of the data, as measured by laboratory QC indicators, suggest that the DQOs were met.

Attachment A – Samples Associated with DQE

Field Sample ID	Sample Date	Sample Purpose
Q3-DUP1-121815	12/18/2015	FD
Q3-IA-01-121815	12/18/2015	REG
Q3-IA-02-121815	12/18/2015	REG
Q3-IA-03-121815	12/18/2015	REG
Q3-IA-04-121815	12/18/2015	REG
Q3-OA-01-121815	12/18/2015	REG
Q3-OA-02-121815	12/18/2015	REG
Q3-VI-01-121815	12/18/2015	REG
Q3-VI-02-121815	12/18/2015	REG
Q3-VI-03-121815	12/18/2015	REG

Notes:
FD = field duplicate
REG = regular sample

Attachment B – Validation Findings

Method	Field Sample ID	Analyte	Final Result	Lab Units	Final Flag	Reason Code
TO-15-SIM	Q3-DUP1-121815	Naphthalene	0.73	µg/m^3	J	LCSL
TO-15-SIM	Q3-IA-01-121815	Naphthalene	0.38	µg/m^3	J	LCSL
TO-15-SIM	Q3-IA-02-121815	Naphthalene	0.3	µg/m^3	J	LCSL
TO-15-SIM	Q3-IA-03-121815	Naphthalene	0.37	µg/m^3	J	LCSL
TO-15-SIM	Q3-IA-04-121815	Naphthalene	0.058	µg/m^3	J	LCSL
TO-15-SIM	Q3-OA-01-121815	Naphthalene	0.13	µg/m^3	J	LCSL
TO-15-SIM	Q3-OA-02-121815	Naphthalene	0.33	µg/m^3	J	LCSL
TO-15-SIM	Q3-VI-01-121815	Naphthalene	1.1	µg/m^3	J	LCSL
TO-15-SIM	Q3-VI-02-121815	Naphthalene	0.77	µg/m^3	J	LCSL
TO-15-SIM	Q3-VI-03-121815	Naphthalene	0.44	µg/m^3	J	LCSL

Notes:
LCSL= Laboratory control sample recovery less than the lower limit

P1505594

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: | 1 of 2

ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-TAT subject to ALSI approval and surcharges.
Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:
CANISTERS PREPARED BY:
Name: Maira Lopez
Title: Laboratory Technician
Custody Sealed Date/Time:
Date Shipped to Client: 12-8-2015
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?		X	
Labels Complete/Accurate?		X	
Cont. in Good Cond.?	X		
Custody Seals Present?		X	
(if present) Seals Intact?			
Returned in ≤ 15 days?	X		

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15						TO-15 FIELD DATA					LABORATORY RECORD						
	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	MS21 Canister Certification File	Canister Pressure ("Hg) Out		Canister Pressure ("Hg) In		Flow Controller Setpoint (mL/min)
1	Q1-IA-43-121815	IA	12/18/15	13:15	13:27		6L	AS00830	FCR00068	29.92	5.56	12051534			-4	98	3.5
2	Q3-IA-01-121815	IA	12/18/15	12:38	13:03		6L	AS00243	FCR00044	29.9	4.9	12061511	-	29.1	-4	21	3.5
3	Q3-IA-02-121815	IA	12/18/15	12:39	12:44		6L	AS00779	FCR00059	29.98	5.94	12011525	-	29.1	-5	23	3.5
4	Q3-IA-03-121815	IA	12/18/15	12:40	13:00		6L	AS00168	FCP00001	29.96	5.55	12041524	-	29.1	-4	88	3.5
5	Q3-IA-04-121815	IA	12/18/15	12:36	13:01		6L	AC02009	FCR00013	29.99	4.6	12051533	-	29.1	-3	92	3.5
6	Q3-OA-01-121815	OUTDOOR	12/18/15	12:41	21:47		6L	AS00327	FCR00049	29.99	4.64	12051532	-	29.1	-3	90	3.5
7	Q3-OA-02-121815	OUTDOOR	12/18/15	12:40	12:46		6L	AS00820	FCR00025	29.89	4.1	12051529	-	29.1	-3	35	3.5
8	Q3-VI-03-121815	SS	12/18/15	15:10	15:40		6L	AC00998	AVG04234	29.91	5.03	12011528	-	29.1	-3	54	
9	Q3-VI-02-121815	SS	12/18/15	16:17	16:28		6L	AS00725	AVG04528	29.93	7.21	12011523	-	29.1	-6	35	
10	Q3-VI-01-121815	SS	12/18/15	15:47	15:53		6L	AC01578	FCA00500	29.96	4.1	12061509	-	29.1	-3	86	3.5

4 of 372

5. SAMPLED BY (Please Print):

LOGGED BY(signature): Kyle Block DATE: 12/22/15 TIME: 0800

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible]	12/22	10:00	2 FEDEX	12/22	1000
3			4	12/28/15	1020
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables: [ ] Standard [ ] CLP-like [ ] DOD [X] TO-15 [ ] Other NJDEP requirements
EDDs-Type:

ALS Field Services: [ ] Pickup [ ] Labor
Other:

State Samples Collected In: [ ] NY [X] NJ [ ] PA [ ] NC [ ] other

Phone: 1-717-944-5541

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 03Mar2011

P1505594

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 3 of 2

ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-TAT subject to ALSI approval and surcharges.
Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:

GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name: Maira Lopez
Title: Laboratory Technician
Custody Sealed Date/Time:
Date Shipped to Client: 12-8-2015
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?		X	
Labels Complete/Accurate?		X	
Cont. in Good Cond.?	X		
Custody Seals Present?		X	
(if present) Seals Intact?			
Returned in ≤ 15 days?	X		

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15						TO-15 FIELD DATA					LABORATORY RECORD					
Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	21 Canister Certification File	Canister Pressure ("Hg) Out		Canister Pressure ("Hg) In		Flow Controller Setpoint (mL/min)
5 of 372 (11) Q3-DUP1-121815	SS	12/18/15	15:10	15:40		6L	AC01424	FCA00632	29.93	5.57	12011524	-	29.1	-4.	68	3.5
2		12/18/15				6L										
3		12/18/15				6L										
4		12/18/15				6L										
5		12/18/15				6L										
6		12/18/15				6L										
7		12/18/15				6L										
8		12/18/15				6L										
9		12/18/15				6L										
10		12/18/15				6L										

5. SAMPLED BY (Please Print):

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible]		10:00	2	12/28/15	1020
3			4		
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables:
[ ] Standard [ ] CLP-like
[ ] DOD [X] TO-15
[ ] Other NJDEP requirements
EDDs-Type:

ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In:
[ ] NY
[X] NJ
[ ] PA
[ ] NC
[ ] other

Phone: 1-717-944-5541

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 03Mar2011

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-IA-01-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-002

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00243
Initial Pressure (psig): -2.03 Final Pressure (psig): 3.63

Canister Dilution Factor: 1.45

CAS #	Compound	Reason code	Result µg/m³	val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.90**		0.15	0.029	**0.28**	0.045	0.0091	**B**
79-01-6	Trichloroethene		**0.059**		0.15	0.012	**0.011**	0.027	0.0023	**J**
100-41-4	Ethylbenzene		**0.45**		0.73	0.014	**0.10**	0.17	0.0032	**J**
179601-23-1	m,p-Xylenes		**1.4**		0.73	0.028	**0.32**	0.17	0.0063	
95-47-6	o-Xylene		**0.56**		0.73	0.013	**0.13**	0.17	0.0030	**J**
108-67-8	1,3,5-Trimethylbenzene		**0.23**		0.73	0.011	**0.047**	0.15	0.0022	**J**
95-63-6	1,2,4-Trimethylbenzene		**0.79**		0.73	0.012	**0.16**	0.15	0.0024	
91-20-3	Naphthalene	LCSL	**0.38**	J	0.036	0.023	**0.072**	0.0069	0.0044	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-IA-02-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-003

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00779

Initial Pressure (psig): -2.53 Final Pressure (psig): 3.57

Canister Dilution Factor: 1.50

CAS #	Compound	Reason code	Result µg/m³	val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.96**		0.15	0.030	**0.30**	0.047	0.0094	**B**
79-01-6	Trichloroethene		**0.046**		0.15	0.013	**0.0085**	0.028	0.0024	**J**
100-41-4	Ethylbenzene		**0.44**		0.75	0.015	**0.10**	0.17	0.0034	**J**
179601-23-1	m,p-Xylenes		**1.4**		0.75	0.029	**0.32**	0.17	0.0066	
95-47-6	o-Xylene		**0.53**		0.75	0.013	**0.12**	0.17	0.0031	**J**
108-67-8	1,3,5-Trimethylbenzene		**0.16**		0.75	0.011	**0.033**	0.15	0.0022	**J**
95-63-6	1,2,4-Trimethylbenzene		**0.53**		0.75	0.012	**0.11**	0.15	0.0025	**J**
91-20-3	Naphthalene	LCSL	**0.30**	J	0.038	0.024	**0.056**	0.0072	0.0046	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-IA-03-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-004

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00168
Initial Pressure (psig): -2.39 Final Pressure (psig): 3.52

Canister Dilution Factor: 1.48

CAS #	Compound	Reason code	Result µg/m³	Val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.91**		0.15	0.030	**0.28**	0.046	0.0093	**B**
79-01-6	Trichloroethene		**0.096**		0.15	0.013	**0.018**	0.028	0.0023	**J**
100-41-4	Ethylbenzene		**0.50**		0.74	0.014	**0.12**	0.17	0.0033	**J**
179601-23-1	m,p-Xylenes		**1.4**		0.74	0.028	**0.33**	0.17	0.0065	
95-47-6	o-Xylene		**0.58**		0.74	0.013	**0.13**	0.17	0.0030	**J**
108-67-8	1,3,5-Trimethylbenzene		**0.20**		0.74	0.011	**0.041**	0.15	0.0022	**J**
95-63-6	1,2,4-Trimethylbenzene		**0.70**		0.74	0.012	**0.14**	0.15	0.0025	**J**
91-20-3	Naphthalene	LCSL	**0.37**	J	0.037	0.024	**0.071**	0.0071	0.0045	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-IA-04-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-005

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02009

Initial Pressure (psig): -1.88 Final Pressure (psig): 3.65

Canister Dilution Factor: 1.43

CAS #	Compound	Reason code	Result µg/m³	Val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.88**		0.14	0.029	**0.28**	0.045	0.0090	**B**
79-01-6	Trichloroethene		**0.038**		0.14	0.012	**0.0070**	0.027	0.0023	**J**
100-41-4	Ethylbenzene		**0.35**		0.72	0.014	**0.081**	0.16	0.0032	**J**
179601-23-1	m,p-Xylenes		**1.1**		0.72	0.027	**0.26**	0.16	0.0063	
95-47-6	o-Xylene		**0.42**		0.72	0.013	**0.096**	0.16	0.0029	**J**
108-67-8	1,3,5-Trimethylbenzene		**0.13**		0.72	0.010	**0.027**	0.15	0.0021	**J**
95-63-6	1,2,4-Trimethylbenzene		**0.41**		0.72	0.012	**0.083**	0.15	0.0024	**J**
91-20-3	Naphthalene	LCSL	**0.058**	J	0.036	0.023	**0.011**	0.0068	0.0044	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-OA-01-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-006

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00327
Initial Pressure (psig): -1.84 Final Pressure (psig): 3.64

Canister Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene	**0.86**	0.14	0.029	**0.27**	0.045	0.0090	**B**
79-01-6	Trichloroethene	**0.042**	0.14	0.012	**0.0078**	0.027	0.0023	**J**
100-41-4	Ethylbenzene	**0.35**	0.72	0.014	**0.081**	0.16	0.0032	**J**
179601-23-1	m,p-Xylenes	**1.1**	0.72	0.027	**0.25**	0.16	0.0063	
95-47-6	o-Xylene	**0.41**	0.72	0.013	**0.094**	0.16	0.0029	**J**
108-67-8	1,3,5-Trimethylbenzene	**0.11**	0.72	0.010	**0.023**	0.15	0.0021	**J**
95-63-6	1,2,4-Trimethylbenzene	**0.40**	0.72	0.012	**0.082**	0.15	0.0024	**J**
91-20-3	Naphthalene	**0.13** J	0.036	0.023	**0.025**	0.0068	0.0044	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-OA-02-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-007

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00820

Initial Pressure (psig): -1.59 Final Pressure (psig): 3.68

Canister Dilution Factor: 1.40

CAS #	Compound	Reason Code	Result µg/m³	val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**1.2**		0.14	0.028	**0.36**	0.044	0.0088	**B**
79-01-6	Trichloroethene		**0.044**		0.14	0.012	**0.0082**	0.026	0.0022	**J**
100-41-4	Ethylbenzene		**0.35**		0.70	0.014	**0.081**	0.16	0.0031	**J**
179601-23-1	m,p-Xylenes		**1.2**		0.70	0.027	**0.28**	0.16	0.0061	
95-47-6	o-Xylene		**0.45**		0.70	0.012	**0.10**	0.16	0.0029	**J**
108-67-8	1,3,5-Trimethylbenzene		**0.17**		0.70	0.010	**0.035**	0.14	0.0021	**J**
95-63-6	1,2,4-Trimethylbenzene		**0.57**		0.70	0.012	**0.12**	0.14	0.0024	**J**
91-20-3	Naphthalene	LCSL	**0.33**	J	0.035	0.022	**0.063**	0.0067	0.0043	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-VI-03-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-008

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01578
Initial Pressure (psig): -1.78 Final Pressure (psig): 3.81

Canister Dilution Factor: 1.43

CAS #	Compound	Reason Code	Result µg/m³	Val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.47**		0.14	0.029	**0.15**	0.045	0.0090	**B**
79-01-6	Trichloroethene		**0.037**		0.14	0.012	**0.0069**	0.027	0.0023	**J**
100-41-4	Ethylbenzene		**0.69**		0.72	0.014	**0.16**	0.16	0.0032	**J**
179601-23-1	m,p-Xylenes		**2.6**		0.72	0.027	**0.60**	0.16	0.0063	
95-47-6	o-Xylene		**0.99**		0.72	0.013	**0.23**	0.16	0.0029	
108-67-8	1,3,5-Trimethylbenzene		**0.59**		0.72	0.010	**0.12**	0.15	0.0021	**J**
95-63-6	1,2,4-Trimethylbenzene		**3.2**		0.72	0.012	**0.66**	0.15	0.0024	
91-20-3	Naphthalene	LCSL	**0.44**	J	0.036	0.023	**0.084**	0.0068	0.0044	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-VI-02-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-009

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00725
Initial Pressure (psig): -3.06 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.57

CAS #	Compound	Reason Code	Result µg/m³	val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.39**		0.16	0.031	**0.12**	0.049	0.0098	**B**
79-01-6	Trichloroethene		**0.023**		0.16	0.013	**0.0042**	0.029	0.0025	**J**
100-41-4	Ethylbenzene		**1.4**		0.79	0.015	**0.33**	0.18	0.0035	
179601-23-1	m,p-Xylenes		**5.2**		0.79	0.030	**1.2**	0.18	0.0069	
95-47-6	o-Xylene		**2.0**		0.79	0.014	**0.45**	0.18	0.0032	
108-67-8	1,3,5-Trimethylbenzene		**0.85**		0.79	0.011	**0.17**	0.16	0.0023	
95-63-6	1,2,4-Trimethylbenzene		**3.6**		0.79	0.013	**0.74**	0.16	0.0027	
91-20-3	Naphthalene	LCSL	**0.77**	J	0.039	0.025	**0.15**	0.0075	0.0048	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-VI-01-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-010

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29 - 12/30/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00998

Initial Pressure (psig): -1.61 Final Pressure (psig): 3.79

Canister Dilution Factor: 1.41

CAS #	Compound	Reason code	Result µg/m³	Val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.39**		0.14	0.028	**0.12**	0.044	0.0088	**B**
79-01-6	Trichloroethene		**0.043**		0.14	0.012	**0.0080**	0.026	0.0022	**J**
100-41-4	Ethylbenzene		**3.8**		7.1	0.14	**0.87**	1.6	0.032	**J, D**
179601-23-1	m,p-Xylenes		**14**		7.1	0.27	**3.2**	1.6	0.062	**D**
95-47-6	o-Xylene		**5.4**		7.1	0.13	**1.3**	1.6	0.029	**J, D**
108-67-8	1,3,5-Trimethylbenzene		**1.5**		7.1	0.10	**0.31**	1.4	0.021	**J, D**
95-63-6	1,2,4-Trimethylbenzene		**5.8**		7.1	0.12	**1.2**	1.4	0.024	**J, D**
91-20-3	Naphthalene	LCSL	**1.1**	J	0.35	0.23	**0.22**	0.067	0.043	**D, L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
D = The reported result is from a dilution.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

P1505594B

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q3-DUP1-121815** ALS Project ID: P1505594B
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-011

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01424
Initial Pressure (psig): -2.20 Final Pressure (psig): 3.60

Canister Dilution Factor: 1.46

CAS #	Compound	Reason code	Result µg/m³	val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.55**		0.15	0.029	**0.17**	0.046	0.0091	**B**
79-01-6	Trichloroethene		**0.044**		0.15	0.012	**0.0081**	0.027	0.0023	**J**
100-41-4	Ethylbenzene		**0.75**		0.73	0.014	**0.17**	0.17	0.0033	
179601-23-1	m,p-Xylenes		**2.8**		0.73	0.028	**0.63**	0.17	0.0064	
95-47-6	o-Xylene		**1.0**		0.73	0.013	**0.24**	0.17	0.0030	
108-67-8	1,3,5-Trimethylbenzene		**0.62**		0.73	0.011	**0.13**	0.15	0.0022	**J**
95-63-6	1,2,4-Trimethylbenzene		**3.2**		0.73	0.012	**0.64**	0.15	0.0025	
91-20-3	Naphthalene	LCSL	**0.73**	J	0.037	0.023	**0.14**	0.0070	0.0045	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

Honeywell Quanta Resources Superfund Site
115 River Road Vapor Intrusion Monitoring
December 2015
Data Quality Evaluation Report

Introduction

The objective of this data quality evaluation (DQE) report is to assess the data quality of analytical results for vapor intrusion samples collected at the Honeywell Quanta Resources Superfund Site. Individual method requirements, guidelines from the *UFP-Quality Assurance Project Plan for Vapor Intrusion, Quanta Resources Corporation Superfund Site, OU1, Edgewater, New Jersey* (September 2013) (QAPP) and the USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (June, 2008) were used in this assessment. This report is intended as a general data quality assessment designed to summarize data issues.

Analytical Data

This DQE report covers 20 normal indoor air samples, four normal outdoor air samples, four normal crawl space samples, two indoor air field duplicates (FD) and one crawl space FD. A list of samples and collection dates is included in Attachment A at the end of this report. These sample results were reported under two sample delivery groups: P1505525 and P1505594A. Samples were collected between December 16 and December 18, 2015. The samples were analyzed for volatile organic compounds by Method TO-15 SIM. The analyses were performed by ALS Environmental in Simi Valley, California. Samples were collected and shipped overnight to the laboratory.

The assessment of data included a review of: (1) the chain-of-custody (CoC) documentation; (2) holding-time compliance; (3) the required field and laboratory quality control (QC) samples; (4) flagging for method blanks; (5) laboratory control samples (LCS); (6) surrogate spike recoveries; (7) internal standard recoveries; (8) initial and continuing calibrations; and, (9) laboratory duplicates.

Field samples were also reviewed to ascertain field compliance and data quality issues. This included a review of FDs.

Data flags are assigned according to the QAPP. These flags, as well as the reason for each flag, are entered into the electronic database. Multiple flags are routinely applied to specific sample method/matrix/analyte combinations, but there will be only one final flag. A final flag is applied to the data and is the most conservative of the applied validation flags. The final flag also includes blank sample impacts.

The data flags are those listed in the QAPP and are defined below:

- J = Analyte was present but reported value may not be accurate or precise.
- R = Analyte was rejected.

- U = Analyte was analyzed for but not detected at the specified detection limit.
- UJ = Analyte was not detected above the detection limit objective. However, the reported detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

Findings

The overall summaries of the data validation findings are contained in the following sections below and summarized in Attachment B at the end of this DQE report.

Holding Times

All holding-time criteria were met.

Calibration

All initial and continuing calibration criteria were met.

Method Blanks

Method blanks were analyzed at the required frequency and were free of contamination.

Field Duplicates

Three FD sets were collected with this dataset. A list of FD and associated parent sample identifications (ID) is included below.

able 1 – List of Field Duplicates	
Field Duplicate Sample ID	**Associated Parent Sample ID**
Q1-DUP1-121615	Q1-IA-24-121615
Q1-DUP2-121715	Q1-CS-01-121715
Q1-DUP3-121715	Q1-IA-13-121715

All relative percent difference (RPD) criteria were met with the following exception:

The RPD of naphthalene was above the acceptance criterion in FD set Q1-CS-01-121715/Q1-DUP2-121715. The detected results in the original and duplicate were qualified as estimated and flagged "J".

Internal Standards

All internal standard criteria were met.

Laboratory Control Samples

Laboratory control samples were analyzed as required. All acceptance criteria were met with following exception:

The recovery of naphthalene was below the lower control limit in a LCS, indicating the associated sample results are possibly biased low. One associated non-detected result was qualified as estimated and flagged "UJ".

Laboratory Duplicates

All laboratory duplicate precision criteria were met.

Chain of Custody

Each sample was documented in a completed chain-of-custody and received at the laboratory in good condition.

Overall Assessment

The final activity in the data quality evaluation is an assessment of whether the data meets the data quality objectives (DQO). The goal of this assessment is to demonstrate that a sufficient number of representative samples were collected and the resulting analytical data can be used to support the decisionmaking process. The following summary highlights the data evaluation findings for the above defined events:

1. No data were rejected and completeness was 100 percent.
2. No data were qualified because of low-level blank contamination.
3. A FD RPD exceedance was observed; two results were qualified as estimated.
4. A LCS recovery exceedance was observed; one result was qualified as estimated.
5. The precision and accuracy of the data, as measured by laboratory QC indicators, suggest that the DQOs were met.

Attachment A – Samples Associated with DQE

Field Sample ID	Sample Date	Sample Purpose
Q1-CS-01-121715	12/17/2015	REG
Q1-CS-04-121715	12/17/2015	REG
Q1-CS-05-121715	12/17/2015	REG
Q1-CS-07-121715	12/17/2015	REG
Q1-DUP1-121615	12/16/2015	FD
Q1-DUP2-121715	12/17/2015	FD
Q1-DUP3-121715	12/17/2015	FD
Q1-IA-03-121615	12/16/2015	REG
Q1-IA-13-121715	12/17/2015	REG
Q1-IA-21-121615	12/16/2015	REG
Q1-IA-22-121615	12/16/2015	REG
Q1-IA-23-121615	12/16/2015	REG
Q1-IA-24-121615	12/16/2015	REG
Q1-IA-25-121615	12/16/2015	REG
Q1-IA-28-121715	12/17/2015	REG
Q1-IA-32-121715	12/17/2015	REG
Q1-IA-35-121715	12/17/2015	REG
Q1-IA-36-121715	12/17/2015	REG
Q1-IA-37-121615	12/16/2015	REG
Q1-IA-39-121615	12/16/2015	REG
Q1-IA-40-121615	12/16/2015	REG
Q1-IA-41-121615	12/16/2015	REG
Q1-IA-42-121615	12/16/2015	REG
Q1-IA-44-121615	12/16/2015	REG
Q1-IA-45-121615	12/16/2015	REG
Q1-IA-46-121715	12/17/2015	REG
Q1-OA-03-121615	12/16/2015	REG
Q1-OA-06-121615	12/16/2015	REG
Q1-OA-09-121715	12/17/2015	REG
Q1-OA-10-121715	12/17/2015	REG
Q1-IA-43-121815	12/18/2015	REG

Notes:
FD = field duplicate
REG = regular sample

Attachment B – Validation Findings

Method	Field Sample ID	Analyte	Final Result	Lab Units	Final Flag	Reason Code
TO-15-SIM	Q1-CS-01-121715	Naphthalene	0.43	µg/m^3	J	FD
TO-15-SIM	Q1-DUP2-121715	Naphthalene	0.15	µg/m^3	J	FD
TO-15-SIM	Q1-IA-43-121815	Naphthalene	3.8	µg/m^3	J	LCSL

Notes:
FD = Field duplicate relative percent difference criterion exceeded.
LCSL= Laboratory control sample recovery less than the lower limit

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
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F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK.

D1505525

COC #: | of

ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT
[X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-TAT subject to ALSI approval and surcharges.
Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:

GC/MS Analyst Signature:

CANISTERS PREPARED BY:
Name: Maira Lopez
Title: Laboratory Technician
Custody Sealed Date/Time: 0
Date Shipped to Client: 12-09-2015
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?	X		
Labels Complete/Accurate?	X		
Cont. in Good Cond.?	X		
Custody Seals Present?		X	
(if present) Seals Intact?			
Returned in ≤ 15 days?	X		

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15						TO-15 FIELD DATA					LABORATORY RECORD					
	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	MS21 Canister Certification File	Canister Pressure ("Hg) Out		Canister Pressure ("Hg) In		Pre Flow Controller Setpoint (mL/min)
5 of 23	Q1-IA-32-121715	IA	12/17/15	14:26	14:28		6L	AS00744	SFC00018	30.13	8.14	12101509	-	29.1	7	47	3.5
	Q1-IA-13-121715	IA	12/17/15	14:50	16:36		6L	AS00658	SFC00059	30.11	14.16	12111509	-	29.1	13	60	3.5
3	Q1-IA-35-121715	IA	12/17/15	13:36	13:53		6L	AS00791	SFC00064	28.75	3.36	12011517	-	29.1	2	48	3.5
4	Q1-IA-28-121715	IA	12/17/15	13:27	13:46		6L	AC01096	EFC00008	30.12	6.3	12101523	-	29.1	5	90	3.5
5	Q1-IA-37-121615	IA	12/16/15	14:31	16:17		6L	AC01200	EFC00007	29.59	7.3	12081531	-	29.1	6	35	3.5
6	Q1-IA-21-121615	IA	12/16/15	14:41	15:07		6L	AS00781	EFC00009	29.55	6.75	12081518	-	29.1	5	47	3.5
7	Q1-IA-23-121615	IA	12/16/15	14:43	15:05		6L	AC01100	EFC00003	29.57	4.51	12081529	-	29.1	3	40	3.5
8	Q1-IA-24-121615	IA	12/16/15	14:37	14:10		6L	AS00710	SFC00043	29.55	8.58	12061508	-	29.1	7	45	3.5
9	Q1-IA-25-121615	IA	12/16/15	14:36	15:08		6L	AC01366	EFC00005	29.49	8.17	12051517	-	29.1	7	06	3.5
10	Q1-IA-42-121615	IA	12/16/15	14:07	13:23		6L	AC02014	EFC00002	29.53	8.89	12071517	-	29.1	7	83	3.5

5. SAMPLED BY (Please Print):

LOGGED BY(signature): Kyle Block DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	12/18	14:00	2 FEDEX		
3			4	12/21/15	0955
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables
[ ] Standard [ ] CLP-like
[ ] DOD [X] TO-15
[ ] Other NJDEP requirements
EDDs-Type:

ALS Field Services: [ ] Pickup [ ] Labor
Other:

State Samples Collected In
[ ] NY
[X] NJ
[ ] PA
[ ] NC
[ ] other

Phone: 1-717-944-5541

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 03Mar2011

P1505525

ALS Environmental

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Middletown, PA 17057
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F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: | of
ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-TAT subject to ALSI approval and surcharges.
Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:
CANISTERS PREPARED BY:
Name: Maira Lopez
Title: Laboratory Technician
Custody Sealed Date/Time:
Date Shipped to Client: 12-09-2015
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?	X		
Labels Complete/Accurate?	X		
Cont. in Good Cond.?	X		
Custody Seals Present?		X	
(if present) Seals Intact?			
Returned in ≤ 15 days?	X		

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

	SAMPLE INFORMATION FOR TO-15						TO-15 FIELD DATA					LABORATORY RECORD			
	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	MS21 Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Pre Setpoint (mL/min)
11	Q1-IA-40-121615	IA	12/16/15	13:33	14:00		6L	AC01987	SFC00063	29.56	4.62	12081522	-29.1	3 54	3.5
12	Q1-IA-41-121615	IA	12/16/15	13:34	13:58		6L	AS00571	SFC00026	29.52	4.67	12081519	-29.1	3 62	3.5
13	3 Q1-IA-22-121615	IA	12/16/15	14:19	15:17		6L	AS00623	SFC00031	29.52	5.8	12081533	-29.1	4 60	3.5
14	4 Q1-IA-03-121615	IA	12/16/15	14:21	15:18		6L	AS00868	SFC00027	29.39	5.24	12081517	-29.1	4 03	3.5
15	5 Q1-IA-44-121615	IA	12/16/15	14:48	15:13		6L	AS00640	SFC00005	29.53	5.71	12081516	-29.1	4 64	3.5
16	6 Q1-IA-45-121615	IA	12/16/15	14:49	15:15		6L	AC01362	SFC00048	29.54	5.93	12081535	-29.1	4 84	3.5
17	7 Q1-IA-39-121615	IA	12/16/15	13:24	14:04		6L	AS00338	SFC00038	29.5	5.03	12081528	-29.1	3 90	3.5
18	8 Q1-CS-01-121715	IA	12/17/15	13:35	13:39		6L	AC02064	SFC00033	30.05	7.2	12071514	-29.1	7 00	3.5
19	9 Q1-CS-04-121715	IA	12/17/15	15:55	14:04		6L	AS00514	SFC00045	30.07	6.4	12071522	-29.1	5 90	3.5
20	10 Q1-CS-05-121715	IA	12/17/15	16:00	14:03		6L	AS00754	FCR00036	30.07	8.12	12061514	-29.1	7 71	3.5

5. SAMPLED BY (Please Print):

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1		14:00	2		
3			4	12/21/15	0955
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables: [ ] Standard [ ] CLP-like [ ] DOD [X] TO-15 [ ] Other NJDEP Req.
EDDs-Type:

ALS Field Services: [ ] Pickup [ ] Labor
Other:

State Samples Collected In: [ ] NY [X] NJ [ ] PA [ ] NC [ ] other

Phone: 1-717-944-5541
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
Rev 03Mar2011

P1505525

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: | of
ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-TAT subject to ALSI approval and surcharges.
Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature: M. Lopez
CANISTERS PREPARED BY:
Name: Maira Lopez
Title: Laboratory Technician
Custody Sealed Date/Time:
Date Shipped to Client: 12-09-2015
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?	X		
Labels Complete/Accurate?	X		
Cont. in Good Cond.?	X		
Custody Seals Present?		X	
(if present) Seals Intact?			
Returned in ≤ 15 days?	X		

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15 / TO-15 FIELD DATA / LABORATORY RECORD

	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	MS21 Canister Certification File	Canister Pressure ("Hg) Out	Canister Pressure ("Hg) In	Flow Controller Pre Setpoint (mL/min)
21	Q1-CS-07-121715	IA	12/17/15	15:45	14:02		6L	AC02108	FCR00010	30.01	7.5	12071521	-29.1	7 00	3.5
22	Q1-OA-03-121615	OUTDOOR	12/16/15	15:02	15:31		6L	AC00686	SFC00011	29.48	6.03	12061517	-29.1	4 68	3.5
23	3 Q1-OA-06-121615	OUTDOOR	12/16/15	15:11	15:34		6L	AC01411	EFC00023	29.52	5.21	12061513	-29.1	3 76	3.5
24	4 Q1-OA-09-121715	OUTDOOR	12/17/15	16:05	16:29		6L	AS00712	FCR00038	30.14	4.37	12111510	-29.1	4 03	3.5
25	5 Q1-OA-10-121715	OUTDOOR	12/17/15	16:10	16:32		6L	AC01775	FCR00004	30.16	1.93	MS21 12111511	-29.1	1 58	3.5
26	6 Q1-DUP1-121615	IA	12/16/15	14:37	14:10		6L	AC01764	EFC00019	28.7	3.75	12071518	-29.1	2 64	3.5
27	7 Q1-DUP2-121715	IA	12/17/15	13:35	13:39		6L	AC00982	SFC00006	29.46	4.53	12061515	-29.1	4 37	3.5
28	8 Q1-DUP3-121715	IA	12/17/15	14:50	16:36		6L	AC01235	FCR00069	30.16	5.55	12101526	-29.1	5 09	3.5
29	9 Q1-IA-46-121715	IA	12/17/15	15:05	15:20		6L	AS00487	FCR00070	30.16	4.54	12101525	-29.1	4 21	3.5
30	10 Q1-IA-36-121715	IA	12/17/15	13:24	13:35		6L	AS00770	FCR00020	30.12	6.6	12091517	-29.1	6 23	3.5

7 of 23

5. SAMPLED BY (Please Print):

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1		14:00	2		
3			4	12/21/15	0955
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables: [ ] Standard [ ] CLP-like [ ] DOD [X] TO-15 [ ] Other NJDEP Req.
EDDs-Type:
ALS Field Services: ☐ Pickup ☐ Labor
Other:

State Samples Collected In: [ ] NY [X] NJ [ ] PA [ ] NC [ ] other

Phone: 1-717-944-5541
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
Rev 03Mar2011

P1505525

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q1-CS-01-121715** ALS Project ID: P1505525
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505525-018

Test Code: EPA TO-15 SIM Date Collected: 12/17/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/21/15
Analyst: Wida Ang Date Analyzed: 12/23/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02064
Initial Pressure (psig): -3.09 Final Pressure (psig): 3.70

Canister Dilution Factor: 1.58

CAS #	Compound	Val Qual	Result µg/m³	Reason Code	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**1.1**		0.16	0.032	**0.35**	0.049	0.0099	
79-01-6	Trichloroethene		**0.61**		0.16	0.013	**0.11**	0.029	0.0025	
100-41-4	Ethylbenzene		**0.95**		0.79	0.015	**0.22**	0.18	0.0035	
179601-23-1	m,p-Xylenes		**3.2**		0.79	0.030	**0.75**	0.18	0.0069	
95-47-6	o-Xylene		**1.1**		0.79	0.014	**0.25**	0.18	0.0032	
108-67-8	1,3,5-Trimethylbenzene		**0.33**		0.79	0.012	**0.067**	0.16	0.0023	**J**
95-63-6	1,2,4-Trimethylbenzene		**1.0**		0.79	0.013	**0.21**	0.16	0.0027	
91-20-3	Naphthalene	J	**0.43**	FD	0.040	0.025	**0.082**	0.0075	0.0048	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

P1505525

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q1-DUP2-121715** ALS Project ID: P1505525
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505525-027

Test Code: EPA TO-15 SIM Date Collected: 12/17/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/21/15
Analyst: Wida Ang Date Analyzed: 12/26/15
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC00982
Initial Pressure (psig): -1.76 Final Pressure (psig): 3.67

Canister Dilution Factor: 1.42

CAS #	Compound	Val Qual	Result µg/m³	Reason Code	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**1.1**		0.14	0.028	**0.35**	0.044	0.0089	**B**
79-01-6	Trichloroethene		**0.61**		0.14	0.012	**0.11**	0.026	0.0022	
100-41-4	Ethylbenzene		**0.79**		0.71	0.014	**0.18**	0.16	0.0032	
179601-23-1	m,p-Xylenes		**2.5**		0.71	0.027	**0.59**	0.16	0.0062	
95-47-6	o-Xylene		**0.90**		0.71	0.013	**0.21**	0.16	0.0029	
108-67-8	1,3,5-Trimethylbenzene		**0.23**		0.71	0.010	**0.047**	0.14	0.0021	**J**
95-63-6	1,2,4-Trimethylbenzene		**0.67**		0.71	0.012	**0.14**	0.14	0.0024	**J**
91-20-3	Naphthalene	J	**0.15**	FD	0.036	0.023	**0.028**	0.0068	0.0043	

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
B = Analyte detected in both the sample and associated method blank.

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

AIR ANALYSIS
CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: P1505594 | 1 of 2
ALS Quote #:

1. CLIENT INFORMATION

Client Name/Address: CH2M - 18 Tremont Street
Boston, MA 02108
Contact: Kyle Block
Phone#: 617-626-7013
Project Name/#: Quanta Resources 115 River Rd VI
Bill To: 668236.HW.20.23.RR

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-TAT subject to ALSI approval and surcharges.
Date Required: Approved By:

Email? [X] -Y kyle.block@ch2m.com
Fax? [ ] -Y No.:

2. ANALYSES/METHOD REQUESTED

√ APPROPRIATE TEST CODE/ANALYTE LIST.

No.	TO-15 Analysis:	STD LIST	UST LIST	OTHER
1	SIM			
2	SIM			
3	SIM			
4	SIM			
5	SIM			
6	SIM			
7	SIM			
8	SIM			
9	SIM			
10	SIM			

3. LABORATORY

LABORATORY CANISTER CERTIFIED BY:
GC/MS Analyst Signature:
CANISTERS PREPARED BY:
Name: Maira Lopez
Title: Laboratory Technician
Custody Sealed Date/Time:
Date Shipped to Client: 12-8-2015
Custody Seal #(s):

RECEIVING INFORMATION:

	Y	N	Initial
COC Complete/Accurate?		X	
Labels Complete/Accurate?		X	
Cont. in Good Cond.?	X		
Custody Seals Present?		X	
(if present) Seals Intact?			
Returned in ≤ 15 days?	X		

Custody Seal #(s):
Courier/Tracking #:

4. FIELD DATA SHEET

SAMPLE INFORMATION FOR TO-15						TO-15 FIELD DATA					LABORATORY RECORD						
	Sample Description/Location (as it will appear on the lab report)	Sample Type- Choose one: *IA-indoor air *AS-ambient soil *V-vapor *SS-sub-slab	Sample Date	Start Time	Stop Time	Temp Deg C	1L 6L	Canister No.	Flow Controller No.	Canister Pressure ("Hg) Start	Canister Pressure ("Hg) Stop	MS21 Canister Certification File	Canister Pressure ("Hg) Out		Canister Pressure ("Hg) In		Flow Controller Setpoint (mL/min)
1	Q1-IA-43-121815	IA	12/18/15	13:15	13:27		6L	AS00830	FCR00068	29.92	5.56	12051534			-4	98	3.5
2	Q3-IA-01-121815	IA	12/18/15	12:38	13:03		6L	AS00243	FCR00044	29.9	4.9	12061511	-	29.1	-4	21	3.5
3	Q3-IA-02-121815	IA	12/18/15	12:39	12:44		6L	AS00779	FCR00059	29.98	5.94	12011525	-	29.1	-5	23	3.5
4	Q3-IA-03-121815	IA	12/18/15	12:40	13:00		6L	AS00168	FCP00001	29.96	5.55	12041524	-	29.1	-4	88	3.5
5	Q3-IA-04-121815	IA	12/18/15	12:36	13:01		6L	AC02009	FCR00013	29.99	4.6	12051533	-	29.1	-3	92	3.5
6	Q3-OA-01-121815	OUTDOOR	12/18/15	12:41	21:47		6L	AS00327	FCR00049	29.99	4.64	12051532	-	29.1	-3	90	3.5
7	Q3-OA-02-121815	OUTDOOR	12/18/15	12:40	12:46		6L	AS00820	FCR00025	29.89	4.1	12051529	-	29.1	-3	35	3.5
8	Q3-VI-03-121815	SS	12/18/15	15:10	15:40		6L	AC00998	AVG04234	29.91	5.03	12011528	-	29.1	-3	54	
9	Q3-VI-02-121815	SS	12/18/15	16:17	16:28		6L	AS00725	AVG04528	29.93	7.21	12011523	-	29.1	-6	35	
10	Q3-VI-01-121815	SS	12/18/15	15:47	15:53		6L	AC01578	FCA00500	29.96	4.1	12061509	-	29.1	-3	86	3.5

4 of 186

5. SAMPLED BY (Please Print):

LOGGED BY(signature): Kyle Block DATE: 12/22/15 TIME: 0800
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible]	12/22	10:00	2 FEDEX	12/22	1000
3			4	12/28/15	1020
5			6		
7			8		
9			10		

6. PROJECT INFORMATION

Data Deliverables: [ ] Standard [ ] CLP-like [ ] DOD [X] TO-15 [ ] Other NJDEP requirements
EDDs-Type:

ALS Field Services: [ ] Pickup [ ] Labor
Other:

State Samples Collected In: [ ] NY [X] NJ [ ] PA [ ] NC [ ] other

Phone: 1-717-944-5541
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
Rev 03Mar2011

P1505594A

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **CH2M Hill**
Client Sample ID: **Q1-IA-43-121815** ALS Project ID: P1505594A
Client Project ID: **Quanta Resources 115 River Rd VI / 668236.HW.20.23.RR** ALS Sample ID: P1505594-001

Test Code: EPA TO-15 SIM Date Collected: 12/18/15
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/28/15
Analyst: Wida Ang Date Analyzed: 12/29/15
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00830
Initial Pressure (psig): -2.41 Final Pressure (psig): 3.56

Canister Dilution Factor: 1.49

CAS #	Compound	Reason Code	Result µg/m³	Val Qual	MRL µg/m³	MDL µg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
71-43-2	Benzene		**0.86**		0.15	0.030	**0.27**	0.047	0.0093	**B**
79-01-6	Trichloroethene		**0.67**		0.15	0.013	**0.12**	0.028	0.0024	
100-41-4	Ethylbenzene		**2.1**		0.75	0.014	**0.48**	0.17	0.0033	
179601-23-1	m,p-Xylenes		**6.9**		0.75	0.028	**1.6**	0.17	0.0065	
95-47-6	o-Xylene		**2.5**		0.75	0.013	**0.57**	0.17	0.0031	
108-67-8	1,3,5-Trimethylbenzene		**2.3**		0.75	0.011	**0.46**	0.15	0.0022	
95-63-6	1,2,4-Trimethylbenzene		**6.8**		0.75	0.012	**1.4**	0.15	0.0025	
91-20-3	Naphthalene	LCSL	**3.8**	J	0.037	0.024	**0.72**	0.0071	0.0045	**L**

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
B = Analyte detected in both the sample and associated method blank.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

Appendix F
Winter 2015/2016 Analytical Results

Appendix F-1(A). Sample Locations - December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

Indoor Air Sample Locations

Location ID	Sample Location Description
Q2-IA-01	Kitchen - counter top
Q2-IA-02	1st floor dining room - on table near wall
Q2-IA-03	2nd floor dining room - on table in SW room

Subslab Sample Locations

Location ID	Sample Location Description
Q2-VI-01	Storage room next to stairs
Q2-VI-02	Kitchen - north side next to water service closet

Outdoor Air Sample Locations

Location ID	Sample Location Description
Q2-OA-01	South side of 163 Old River Road building - chained to fence
Q2-OA-02	Northwest of parking lot - chained to fence

Appendix F-1(B). Indoor Air Analytical Data Compared to NJDEP RALs - December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

	Location	Q2-IA-01		Q2-IA-02		Q2-IA-03			
	Location Description	1st floor kitchen		1st floor dining room		2nd floor dining room			
	Field Sample ID	Q2-IA-01-121515		Q2-IA-02-121515		Q2-IA-03-121515		Q2-DUP1-121515	
	Sample Date	12/15/2015		12/15/2015		12/15/2015			
	Units	µg/m^3		µg/m^3		µg/m^3		µg/m^3	
Cas #	Parameter Name	NJDEP Nonresidential RAL (µg/m^3)							
71-43-2	Benzene	200	0.66		0.64		0.63	J	1.5	J
100-41-4	Ethylbenzene	500	0.83		0.36	J	0.68	J	0.73	J
91-20-3	Naphthalene	26	0.70		0.28		1.7	J	0.53	J
79-01-6	Trichloroethene	18	0.035	J	0.035	J	0.043	J	0.048	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.69	J	0.48	J	0.83		0.58	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.24	J	0.14	J	0.29	J	0.23	J
108-38-3	o-Xylene[2]	Not Available	0.81		0.42	J	0.74		0.76	J
NA	m&p-Xylene[2]	Not Available	2.1		1.2		2.1		2.2	
1330-20-7	Xylenes (total) - sum of isomers	880	2.9		1.6	J	2.8		3.0	J

Notes:

0.63 Bold and shaded indicates an analyte concentration equal to or greater than the NJDEP RAL.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

RAL = Rapid Action Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-1(C-1). Indoor Air Analytical Data Compared to EPA Commercial Air Risk-Based Screening Levels - December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

					Location	Outdoor Air Data[a]		Q2-IA-01		Q2-IA-02		Q2-IA-03		
					Location Description	103 RR, 115 RR, and 163 ORR		1st floor kitchen		1st floor dining room		2nd floor dining room		
					Field Sample ID	Range of All Data		Q2-IA-01-121515		Q2-IA-02-121515		Q2-IA-03-121515		Q2-DUP1-12/15/15
					Sample Date	12/14/2015 - 12/18/2015		12/15/2015		12/15/2015		12/15/2015		
					Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
		Commercial IASLs												
Cas #	Parameter Name	10^{-6} Target Risk (µg/m³)	10^{-5} Target Risk (µg/m³)	10^{-4} Target Risk (µg/m³)	HQ=1 Target Risk (µg/m³)									
71-43-2	Benzene	1.6	16	160	130	0.50 - 1.2		0.66		0.64		0.63	J	1.5	J
100-41-4	Ethylbenzene	4.9	49	490	4,400	0.15 J - 0.35 J		0.83		0.36	J	0.68	J	0.73	J
91-20-3	Naphthalene	0.36	3.6	36	13	0.070 - 0.84		0.70		0.28		1.7	J	0.53	J
79-01-6	Trichloroethene	3.0	30	300	8.8	0.019 J - 0.071 J		0.035	J	0.035	J	0.043	J	0.048	J
95-63-6	1,2,4-Trimethylbenzene	Not Available			31	0.19 J - 0.57 J		0.69	J	0.48	J	0.83		0.58	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			31	0.059 J - 0.17 J		0.24	J	0.14	J	0.29	J	0.23	J
108-38-3	o-Xylene	Not Available			440	0.16 J - 0.45 J		0.81		0.42	J	0.74		0.76	J
NA	m&p-Xylene[2]	Not Available				0.43 J - 1.2		2.1		1.2		2.1		2.2	
1330-20-7	Xylenes (total) - sum of isomers	Not Available			440	0.59 J - 1.7 J		2.9		1.6	J	2.8		3.0	J

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the 10-4 target risk IASL or HQ=1 target risk IASL and greater than outdoor air concentrations.

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commerical Air.

NA = Not applicable

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of 2- to 4- times observed at the 163 Old River Road Building since 2008 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

Appendix F-1(C-2). Indoor Air Analytical Data Compared to NJDEP Non-Residential Screening Levels - December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

	Location	Outdoor Air Data	Q2-IA-01		Q2-IA-02		Q2-IA-03			
	Location Description	103 RR, 115 RR, and 163 ORR	1st floor kitchen		1st floor dining room		2nd floor dining room			
	Field Sample ID	Range of All Data	Q2-IA-01-121515		Q2-IA-02-121515		Q2-IA-03-121515		Q2-DUP1-121515	
	Sample Date	12/14/2015 - 12/18/2015	12/15/2015		12/15/2015		12/15/2015			
	Units	µg/m³	µg/m³		µg/m³		µg/m³		µg/m³	
Cas #	Parameter Name	NJDEP Nonresidential IASL (µg/m³)								
71-43-2	Benzene	2	0.50 - 1.2	0.66		0.64		0.63	J	1.5	J
100-41-4	Ethylbenzene	5	0.15 J - 0.35 J	0.83		0.36	J	0.68	J	0.73	J
91-20-3	Naphthalene	3	0.070 - 0.84	0.70		0.28		1.7	J	0.53	J
79-01-6	Trichloroethene	3	0.019 J - 0.071 J	0.035	J	0.035	J	0.043	J	0.048	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.19 J - 0.57 J	0.69	J	0.48	J	0.83		0.58	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.059 J - 0.17 J	0.24	J	0.14	J	0.29	J	0.23	J
108-38-3	o-Xylene[2]	Not Available	0.16 J - 0.45 J	0.81		0.42	J	0.74		0.76	J
NA	m&p-Xylene[2]	Not Available	0.43 J - 1.2	2.1		1.2		2.1		2.2	
1330-20-7	Xylenes (total) - sum of isomers	440	0.59 J - 1.7 J	2.9		1.6	J	2.8		3.0	J

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential IASL and greater than measured outdoor air concentrations.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of 2- to 4- times observed at the 163 Old River Road Building since 2008 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

NJDEP Generic IASLs are from the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-1(D-1). Subslab Soil Gas Analytical Data Compared to EPA Commercial Risk-Based Screening Levels - December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

					Location	**Q2-VI-01**		**Q2-VI-02**	
					Location Description	**Storage room next to stairs**		**Kitchen - north side**	
					Field Sample ID	**Q2-VI-01-121515**		**Q2-VI-02-121515**	
					Sample Date	**12/15/2015**		**12/15/2015**	
					Units	**µg/m³**		**µg/m³**	
		Commercial SGSL							
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-5} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**				
71-43-2	Benzene	52	520	5,200	4,400	0.31		0.34	
100-41-4	Ethylbenzene	160	1600	16,000	150,000	1.2		11	
91-20-3	Naphthalene	12	120	1,200	440	0.59		0.73	
79-01-6	Trichloroethene	100	1,000	10,000	290	0.068	J	0.075	J
95-63-6	1,2,4-Trimethylbenzene	Not Available			1,000	3.4		7.9	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			1,000	0.85		3.6	
108-38-3	o-Xylene	Not Available			15,000	1.6		17	
NA	m&p-Xylene[2]	Not Available				4.6		18	
1330-20-7	Xylenes (total) - sum of isomers	Not Available			15,000	6.2		35	

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the 10-4 target risk SGSL or HQ=1 target risk SGSL.

The SGSLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

The SGSLs were derived from the EPA 2015 RSLs by applying the EPA Vapor Intrusion Guidance (2015) default attenuation factor of 0.03.

SGSL = Soil Gas Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene.

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

Appendix F-1(D-2). Subslab Soil Gas Analytical Data Compared to NJDEP Non-Residential Screening Levels - December 2015

163 Old River Road Building

Quanta Site, Edgewater, New Jersey

	Location	Q2-VI-01		Q2-VI-02	
	Location Description	Storage room next to stairs		Kitchen - north side	
	Field Sample ID	Q2-VI-01-121515		Q2-VI-02-121515	
	Sample Date	12/15/2015		12/15/2015	
	Units	µg/m^3		µg/m^3	
Cas #	**Parameter Name**	**NJDEP Nonresidential SGSL (µg/m³)**			
71-43-2	Benzene	79	0.31		0.34	
100-41-4	Ethylbenzene	250	1.2		11	
91-20-3	Naphthalene	26	0.59		0.73	
79-01-6	Trichloroethene	150	0.068	J	0.075	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	3.4		7.9	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.85		3.6	
108-38-3	o-Xylene[2]	Not Available	1.6		17	
NA	m&p-Xylene[2]	Not Available	4.6		18	
1330-20-7	Xylenes (total) - sum of isomers	22,000	6.2		35	

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential SGSL.

NJDEP Generic SGSLs are from Table 1 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

SGSL = Soil Gas Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-1(E). Outdoor Air Analytical Data - December 2015

All Three Buildings - 115 River Road, 163 Old River Road, and 103 River Road

Quanta Site, Edgewater, New Jersey

Building		115 River Road								163 Old River Road				103 River Road				Outdoor Air Data
Location		Q1-OA-03		Q1-OA-06		Q1-OA-09		Q1-OA-10		Q2-OA-01		Q2-OA-02		Q3-OA-01		Q3-OA-02		
Location Description		South Parking Lot - on Fence		NE Corner at Bulkhead		South of Bldg - Next to River		NW Corner of Bldg 12		South Side of 163 ORR Building		Northwest of 163 ORR Parking Lot		North Side of 103 RR Building		SW Corner of the 103 RR Building		103 RR, 115 RR, and 163 ORR
Field Sample ID		Q1-OA-03-121615		Q1-OA-06-121615		Q1-OA-09-121715		Q1-OA-10-121715		Q2-OA-01-121515		Q2-OA-02-121515		Q3-OA-01-121815		Q3-OA-02-121815		Range of All Data
Sample Date		12/16/2015		12/16/2015		12/17/2015		12/17/2015		12/15/2015		12/15/2015		12/18/2015		12/18/2015		12/14/2015 - 12/18/2015
Units		µg/m^3		µg/m3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3
Cas #	Parameter Name																	
71-43-2	Benzene	0.53		0.50		0.85		0.87		0.55		0.61		0.86		1.2		0.50 - 1.2
100-41-4	Ethylbenzene	0.16	J	0.15	J	0.26	J	0.31	J	0.23	J	0.28	J	0.35	J	0.35	J	0.15 J - 0.35 J
91-20-3	Naphthalene	0.11		0.84		0.070		0.15		0.17		0.17		0.13	J	0.33	J	0.070 - 0.84
79-01-6	Trichloroethene	0.019	J	0.019	J	0.071	J	0.035	J	0.024	J	0.027	J	0.042	J	0.044	J	0.019 J - 0.071 J
95-63-6	1,2,4-Trimethylbenzene	0.23	J	0.19	J	0.32	J	0.34	J	0.29	J	0.32	J	0.40	J	0.57	J	0.19 J - 0.57 J
108-67-8	1,3,5-Trimethylbenzene	0.066	J	0.059	J	0.091	J	0.093	J	0.079	J	0.093	J	0.11	J	0.17	J	0.059 J - 0.17 J
108-38-3	o-Xylene	0.20	J	0.16	J	0.32	J	0.37	J	0.28	J	0.31	J	0.41	J	0.45	J	0.16 J - 0.45 J
NA	m&p-Xylene	0.51	J	0.43	J	0.90		0.96		0.78		0.93		1.1		1.2		0.43 J - 1.2
1330-20-7	Xylenes (total) - sum of isomers	0.71	J	0.59	J	1.2	J	1.3	J	1.1	J	1.2	J	1.5	J	1.7	J	0.59 J - 1.7 J

Notes:

J = Data below calibration curve for that constituent, quantity estimated.

Attachment F-2(A). Sample Locations - Winter 2015/2016 Vapor Intrusion Monitoring Event

103 River Road Building

Quanta Site, Edgewater, New Jersey

Indoor Air Sample Locations

Location ID	Sample Location Description
Q3-IA-01	Medical office storage room
Q3-IA-02	Dentist office hallway by exit door
Q3-IA-03	Medical office reception area
Q3-IA-04	Medical office utility room

Subslab Sample Locations

Location ID	Sample Location Description
Q3-VI-01	Medical office storage room
Q3-VI-02	South stairwell
Q3-VI-03	Medical office utility room

Outdoor Air Sample Locations

Location ID	Sample Location Description
Q3-OA-01	North side of 103 River Road building
Q3-OA-02	Southwest corner of the 103 RR Building

Attachment F-2(B). Indoor Air Analytical Data Compared to NJDEP RALs - December 2015

103 River Road Building

Quanta Site, Edgewater, New Jersey

	Location	Q3-IA-01		Q3-IA-02		Q3-IA-03		Q3-IA-04	
	Location Description	Medical Office Storage Room		Dentist Office Hallway		Medical Office Reception Area		Medical office utility room	
	Field Sample ID	Q3-IA-01-121815		Q3-IA-02-121815		Q3-IA-03-121815		Q3-IA-04-121815	
	Sample Date	12/18/2015		12/18/2015		12/18/2015		12/18/2015	
	Units	µg/m³		µg/m³		µg/m³		µg/m³	
Cas #	**Parameter Name**	**NJDEP Nonresidential RAL (µg/m³)**							
71-43-2	Benzene	200	0.90		0.96		0.91		0.88	
100-41-4	Ethylbenzene	500	0.45	J	0.44	J	0.50	J	0.35	J
91-20-3	Naphthalene	26	0.38	J	0.30	J	0.37	J	0.058	J
79-01-6	Trichloroethene	18	0.059	J	0.046	J	0.096	J	0.038	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.79		0.53	J	0.70	J	0.41	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.23	J	0.16	J	0.20	J	0.13	J
108-38-3	o-Xylene[2]	Not Available	0.56	J	0.53	J	0.58	J	0.42	J
NA	m&p-Xylene[2]	Not Available	1.4		1.4		1.4		1.1	
1330-20-7	Xylenes (total) - sum of isomers	880	2.0	J	1.9	J	2.0	J	1.5	J

Notes:

0.63 Bold and shaded indicates an analyte concentration equal to or greater than the NJDEP RAL.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

RAL = Rapid Action Level

NA = Not applicable

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Attachment F-2(C-1). Indoor Air Analytical Data Compared to EPA Commercial Air Risk-Based Screening Levels - December 2015

103 River Road Building

Quanta Site, Edgewater, New Jersey

					Location	Outdoor Air Data[a]		Q3-IA-01		Q3-IA-02		Q3-IA-03		Q3-IA-04	
					Location Description	103 RR, 115 RR, and 163 ORR		Medical Office Storage Room		Dentist Office Hallway		Medical Office Reception Area		Medical office utility room	
					Field Sample ID	Range of All Data		Q3-IA-01-121815		Q3-IA-02-121815		Q3-IA-03-121815		Q3-IA-04-121815	
					Sample Date	12/14/15 - 12/18/15		12/18/2015		12/18/2015		12/18/2015		12/18/2015	
					Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
		Commercial IASLs													
Cas #	Parameter Name	10^{-6} Target Risk (µg/m³)	10^{-5} Target Risk (µg/m³)	10^{-4} Target Risk (µg/m³)	HQ=1 Target Risk (µg/m³)										
71-43-2	Benzene	1.6	16	160	130	0.50 - 1.2		0.90		0.96		0.91		0.88	
100-41-4	Ethylbenzene	4.9	49	490	4,400	0.15 J - 0.35 J		0.45	J	0.44	J	0.50	J	0.35	J
91-20-3	Naphthalene	0.36	3.6	36	13	0.070 - 0.84		0.38	J	0.30	J	0.37	J	0.058	J
79-01-6	Trichloroethene	3.0	30	300	8.8	0.019 J - 0.071 J		0.059	J	0.046	J	0.096	J	0.038	J
95-63-6	1,2,4-Trimethylbenzene	Not Available			31	0.19 J - 0.57 J		0.79		0.53	J	0.70	J	0.41	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			31	0.059 J - 0.17 J		0.23	J	0.16	J	0.20	J	0.13	J
108-38-3	o-Xylene	Not Available			440	0.16 J - 0.45 J		0.56	J	0.53	J	0.58	J	0.42	J
NA	m&p-Xylene[2]	Not Available				0.43 J - 1.2		1.4		1.4		1.4		1.1	
1330-20-7	Xylenes (total) - sum of isomers	Not Available			440	0.59 J - 1.7 J		2.0	J	1.9	J	2.0	J	1.5	J

Notes:

0.63 Bold and Shaded indicates the value is greater than or equal to the 10^{-4} target risk IASL and/or HQ=1 target risk IASL.

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

NA = Not applicable

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of 2- to 4- times observed at the 103 River Road Building since 2009 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

Attachment F-2(C-2). Indoor Air Analytical Data Compared to NJDEP Non-Residential Screening Levels - December 2015

103 River Road Building

Quanta Site, Edgewater, New Jersey

		Location	Outdoor Air Data[a]		Q3-IA-01		Q3-IA-02		Q3-IA-03		Q3-IA-04	
		Location Description	103 RR, 115 RR, and 163 ORR		Medical Office Storage Room		Dentist Office Hallway		Medical Office Reception Area		Medical office utility room	
		Field Sample ID	Range of All Data		Q3-IA-01-121815		Q3-IA-02-121815		Q3-IA-03-121815		Q3-IA-04-121815	
		Sample Date	12/14/15 - 12/18/15		12/18/2015		12/18/2015		12/18/2015		12/18/2015	
		Units	µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3	
Cas #	Parameter Name	NJDEP Nonresidential IASL (µg/m^3)										
71-43-2	Benzene	2	0.50 - 1.2		0.90		0.96		0.91		0.88	
100-41-4	Ethylbenzene	5	0.15 J - 0.35 J		0.45	J	0.44	J	0.50	J	0.35	J
91-20-3	Naphthalene	3	0.070 - 0.84		0.38	J	0.30	J	0.37	J	0.058	J
79-01-6	Trichloroethene	3	0.019 J - 0.071 J		0.059	J	0.046	J	0.096	J	0.038	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.19 J - 0.57 J		0.79		0.53	J	0.70	J	0.41	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.059 J - 0.17 J		0.23	J	0.16	J	0.20	J	0.13	J
108-38-3	o-Xylene[2]	Not Available	0.16 J - 0.45 J		0.56	J	0.53	J	0.58	J	0.42	J
NA	m&p-Xylene[2]	Not Available	0.43 J - 1.2		1.4		1.4		1.4		1.1	
1330-20-7	Xylenes (total) - sum of isomers	440	0.59 J - 1.7 J		2.0	J	1.9	J	2.0	J	1.5	J

Notes:

0.63 Bold and italic indicates the value is greater than or equal to the NJDEP Nonresidential IASL, but is less than or equal to measured outdoor air concentrations.

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential IASL and greater than measured outdoor air concentrations.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of 2- to 4- times observed at the 103 River Road Building since 2009 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations

NJDEP Generic IASLs are from the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

IASL = Indoor Air Screening Level

NA = Not applicable

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Attachment F-2 (D-1). Subslab Soil Gas Analytical Data Compared to EPA Commercial Risk-Based Screening Levels - December 2015

103 River Road Building

Quanta Site, Edgewater, New Jersey

					Location	**Q3-VI-01**		**Q3-VI-02**		**Q3-VI-03**				
					Location Description	**Medical Office Storage Room**		**South Stairwell**		**Medical Office Utility Room**				
					Field Sample ID	**Q3-VI-01-121815**		**Q3-VI-02-121815**		**Q3-VI-03-121815**		**Q3-DUP1-121815**		
					Sample Date	**12/18/2015**		**12/18/2015**		**12/18/2015**				
					Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		
		Commercial SGSLs												
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-5} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**									
71-43-2	Benzene	52	520	5,200	4,400	0.39		0.39		0.47		0.55		
100-41-4	Ethylbenzene	160	1600	16,000	150,000	3.8	J	1.4		0.69	J	0.75		
91-20-3	Naphthalene	12	120	1,200	440	1.1	J	0.77	J	0.44	J	0.73	J	
79-01-6	Trichloroethene	100	1,000	10,000	290	0.043	J	0.023	J	0.037	J	0.044	J	
95-63-6	1,2,4-Trimethylbenzene	Not Available			1,000	5.8	J	3.6		3.2		3.2		
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			1,000	1.5	J	0.85		0.59	J	0.62	J	
108-38-3	o-Xylene	Not Available			15,000	5.4	J	2.0		0.99		1.0		
NA	m&p-Xylene[2]	Not Available				14		5.2		2.6		2.8		
1330-20-7	Xylenes (total) - sum of isomers	Not Available			15,000	19	J	7.2		3.6		3.8		

Notes:

Shaded indicates the value is greater than or equal to the 10^{-4} target risk IASL and/or HQ=1 target risk IASL.

The SGSLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

The SGSLs were derived from the EPA 2015 RSLs by applying the EPA Vapor Intrusion Guidance (2015) default attenuation factor of 0.03.

SGSL = Soil Gas Screening Level

J = Data below calibration curve for that constituent, quantity estimated

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene.

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

Attachment F-2 (D-2). Subslab Soil Gas Analytical Data Compared to NJDEP Non-Residential Screening Levels - December 2015

103 River Road Building

Quanta Site, Edgewater, New Jersey

	Location	Q3-VI-01		Q3-VI-02		Q3-VI-03			
	Location Description	Medical Office Storage Room		South Stairwell		Medical Office Utility Room			
	Field Sample ID	Q3-VI-01-121815		Q3-VI-02-121815		Q3-VI-03-121815		Q3-DUP1-121815	
	Sample Date	12/18/2015		12/18/2015		12/18/2015			
	Units	µg/m³		µg/m³		µg/m³		µg/m³	
Cas #	Parameter Name	NJDEP Nonresidential SGSL (µg/m³)							
71-43-2	Benzene	79	0.39		0.39		0.47		0.55	
100-41-4	Ethylbenzene	250	3.8	J	1.4		0.69	J	0.75	
91-20-3	Naphthalene	26	1.1	J	0.77	J	0.44	J	0.73	J
79-01-6	Trichloroethene	150	0.043	J	0.023	J	0.037	J	0.044	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	5.8	J	3.6		3.2		3.2	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	1.5	J	0.85		0.59	J	0.62	J
108-38-3	o-Xylene[2]	Not Available	5.4	J	2.0		0.99		1.0	
NA	m&p-Xylene[2]	Not Available	14		5.2		2.6		2.8	
1330-20-7	Xylenes (total) - sum of isomers	22,000	19	J	7.2		3.6		3.8	

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential SGSL.

NJDEP Generic SGSLs are from Table 1 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

SGSL = Soil Gas Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Attachment F-2(F). Outdoor Air Analytical Data - December 2015

All Three Buildings - 115 River Road, 163 Old River Road, and 103 River Road

Quanta Site, Edgewater, New Jersey

Building		115 River Road								163 Old River Road				103 River Road				Outdoor Air Data
Location		Q1-OA-03		Q1-OA-06		Q1-OA-09		Q1-OA-10		Q2-OA-01		Q2-OA-02		Q3-OA-01		Q3-OA-02		
Location Description		South Parking Lot - on Fence		NE Corner at Bulkhead		South of Bldg - Next to River		NW Corner of Bldg 12		South Side of 163 ORR Building		Northwest of 163 ORR Parking Lot		North Side of 103 RR Building		SW Corner of the 103 RR Building		103 RR, 115 RR, and 163 ORR
Field Sample ID		Q1-OA-03-121615		Q1-OA-06-121615		Q1-OA-09-121715		Q1-OA-10-121715		Q2-OA-01-121515		Q2-OA-02-121515		Q3-OA-01-121815		Q3-OA-02-121815		Range of All Data
Sample Date		12/16/2015		12/16/2015		12/17/2015		12/17/2015		12/15/2015		12/15/2015		12/18/2015		12/18/2015		12/14/2015 - 12/18/2015
Units		µg/m^3		µg/m3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3
Cas #	Parameter Name																	
71-43-2	Benzene	0.53		0.50		0.85		0.87		0.55		0.61		0.86		1.2		0.50 - 1.2
100-41-4	Ethylbenzene	0.16	J	0.15	J	0.26	J	0.31	J	0.23	J	0.28	J	0.35	J	0.35	J	0.15 J - 0.35 J
91-20-3	Naphthalene	0.11		0.84		0.070		0.15		0.17		0.17		0.13	J	0.33	J	0.070 - 0.84
79-01-6	Trichloroethene	0.019	J	0.019	J	0.071	J	0.035	J	0.024	J	0.027	J	0.042	J	0.044	J	0.019 J - 0.071 J
95-63-6	1,2,4-Trimethylbenzene	0.23	J	0.19	J	0.32	J	0.34	J	0.29	J	0.32	J	0.40	J	0.57	J	0.19 J - 0.57 J
108-67-8	1,3,5-Trimethylbenzene	0.066	J	0.059	J	0.091	J	0.093	J	0.079	J	0.093	J	0.11	J	0.17	J	0.059 J - 0.17 J
108-38-3	o-Xylene	0.20	J	0.16	J	0.32	J	0.37	J	0.28	J	0.31	J	0.41	J	0.45	J	0.16 J - 0.45 J
NA	m&p-Xylene	0.51	J	0.43	J	0.90		0.96		0.78		0.93		1.1		1.2		0.43 J - 1.2
1330-20-7	Xylenes (total) - sum of isomers	0.71	J	0.59	J	1.2	J	1.3	J	1.1	J	1.2	J	1.5	J	1.7	J	0.59 J - 1.7 J

Notes:

J = Data below calibration curve for that constituent, quantity estimated.

Attachment F-3(A). Sample Locations - Winter 2015/2016 Vapor Intrusion Monitoring Event

115 River Road Building

Quanta Site, Edgewater, New Jersey

Indoor Air Sample Locations

Location ID	Bldg #	Floor	Sample Location Description
Q1-IA-32	2	1st	Center of main open space on table
Q1-IA-13	3	2nd	Suite 321 - open workspace on south side near center of Bldg 3
Q1-IA-35	4	1st	Conference room on side table (center of Building 4)
Q1-IA-28	6	1st	Storage room on north side near former stairway
Q1-IA-36	7	1st	Suite 701 - east side of main room next to fighting ring
Q1-IA-37	7/8	1st	West side of main room next to men's restroom
Q1-IA-21	7/8	Basement	Hallway near Bldg 7/8 Sump 2
Q1-IA-23	7/8	Basement	Far east room - middle of room near the floor drain
Q1-IA-24	7/8	Basement	Far west room - next to elevator shaft
Q1-IA-25	7/8	Basement	West side, main room near Bldg 7/8 Sump 1
Q1-IA-42	8	2nd	Suite 824 - corner of inner office near elevator
Q1-IA-43	8	3rd	Suite 830 - entrance area near elevator
Q1-IA-40	9	1st	Suite 901 - west side utility room
Q1-IA-41	9	1st	Suite 901 - east side storage room
Q1-IA-22	10	Basement	Main room - center of room
Q1-IA-03	10	Basement	Northeastern most storage room with sump
Q1-IA-44	10	1st	Suite 1001 - center of main room
Q1-IA-45	10	1st	Suite 1003 - center of reception area
Q1-IA-46	10	2nd	Suite 1026 - on staircase in back of office
Q1-IA-39	11	1st	West side of main room

Crawl Space Air Sample Locations

Location ID	Bldg #	Floor	Sample Location Description
Q1-CS-01	6	Crawl Space	Northwest side
Q1-CS-04	4	Crawl Space	South side
Q1-CS-05	3	Crawl Space	South side
Q1-CS-07	2	Crawl Space	South side

Outdoor Air Sample Locations

Location ID	Bldg #	Floor	Sample Location Description
Q1-OA-03	10	Fence	115 River Road south parking lot chained to fence
Q1-OA-06	1	Fence	North side of 115 River Road near Hudson River at Quanta site Fence
Q1-OA-09	1	Fence	South of 115 RR Bldg next to Hudson River
Q1-OA-10	12	Fence	Northwest corner of Building 12 at Quanta Site fence

Appendix F-3(B). Indoor Air Analytical Data Compared to NJDEP RALs, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

		Building	**Building 2**		**Building 3**				**Building 4**		**Building 6**		**Building 7**			
		Floor	**1st Floor**		**Vacant 2nd Floor**				**1st Floor**		**1st Floor**		**1st Floor**			
		Location Description	**Center of main open space**		**Center of Bldg, South Side of Office**				**Conference Room On Side Table**		**North Side Storage Room**		**Main Room - East Side**		**Main Room - West Side**	
		Location	**Q1-IA-32**		**Q1-IA-13**				**Q1-IA-35**		**Q1-IA-28**		**Q1-IA-36**		**Q1-IA-37**	
		Field Sample ID	**Q1-IA-32-121715**		**Q1-IA-13-121715**		**Q1-DUP3-121715**		**Q1-IA-35-121715**		**QI-IA-28-121715**		**Q1-IA-36-121715**		**QI-IA-37-121615**	
		Sample Date	**12/17/2015**		**12/17/2015**				**12/17/2015**		**12/17/2015**		**12/17/2015**		**12/16/2015**	
		Units	**µg/m3**		**µg/m^3**		**µg/m3**		**µg/m3**		**µg/m^3**		**µg/m^3**		**µg/m^3**	
Cas #	**Parameter Name**	**NJDEP Nonresidential RAL (µg/m^3)**														
71-43-2	Benzene	200	1.1		2.0		2.0		2.2		1.0		0.93		0.57	
100-41-4	Ethylbenzene	500	0.81		1.8		1.7		0.85		0.68	J	0.47	J	0.25	J
91-20-3	Naphthalene	26	1.1		1.2		1.2		1.2		0.26		0.65		0.31	
79-01-6	Trichloroethene	18	0.057	J	0.084	J	0.061	J	0.066	J	0.095	J	0.057	J	0.028	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.98		1.8		2.0		1.2		0.64	J	0.65	J	0.39	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.28	J	0.51	J	0.57	J	0.32	J	0.19	J	0.21	J	0.12	J
108-38-3	o-Xylene[2]	Not Available	0.97		2.0		2.0		1.0		0.76		0.57	J	0.33	J
Not Available	m&p-Xylene[2]	Not Available	2.6		5.9		5.8		2.7		2.2		1.5		0.80	
1330-20-7	Xylenes (total) - sum of isomers	880	3.6		7.9		7.8		3.7		3.0		2.1	J	1.1	J

Notes:

NJDEP = New Jersey Department of Environmental Protection

RAL = Rapid Action Level

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013) associated with the site determined by sampling performed from 2006 to 2015

The samples were analyzed by USEPA Method TO-15 and TO-15 SIM for contaminants of interest

J = Data below calibration curve for that constituent, quantity estimated. results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

0.63 Bold and shaded indicates an analyte concentration equal to or greater than the NJDEP RAL.

Appendix F-3(B). Indoor Air Analytical Data Compared to NJDEP RALs, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

Building	Building 7/8								Building 8			
Floor	Vacant Basement								2nd Floor		3rd Floor	
Location Description	Hallway Near Sump 2		Far East Room - Next to Flr Drain		Far West Room - Next to Elevator Shaft				West Side Main Room by Sump 1		Suite 824 - Inner Office Near Elevator		Suite 830 - Entrance Area Near Elevator	
Location	Q1-IA-21		Q1-IA-23		Q1-IA-24				Q1-IA-25		Q1-IA-42		Q1-IA-43	
Field Sample ID	Q1-IA-21-121615		Q1-IA-23-121615		Q1-IA-24-121615		Q1-DUP1-121615		Q1-IA-25-121615		Q1-IA-42-121615		Q1-IA-43-121815	
Sample Date	12/16/2015		12/16/2015		12/16/2015				12/16/2015		12/16/2015		12/18/2015	
Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
Cas #	Parameter Name	NJDEP Nonresidential RAL (µg/m³)												
71-43-2	Benzene	200	1.4		0.79		2.3		2.6		1.2		0.64		0.86	
100-41-4	Ethylbenzene	500	0.79		0.72		2.3		2.3		1.0		0.65	J	2.1	
91-20-3	Naphthalene	26	0.66		0.37		4.0		3.2		1.1		0.62		3.8	J
79-01-6	Trichloroethene	18	0.022	J	1.4		0.036	J	0.034	J	0.037	J	0.090	J	0.67	
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.53	J	0.73		1.3		1.2		0.70	J	0.59	J	6.8	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.17	J	0.21	J	0.41	J	0.38	J	0.23	J	0.17	J	2.3	
108-38-3	o-Xylene[2]	Not Available	0.54	J	0.82		1.3		1.3		0.69	J	0.72	J	2.5	
Not Available	m&p-Xylene[2]	Not Available	1.0		2.3		1.9		1.9		1.2		2.0		6.9	
1330-20-7	Xylenes (total) - sum of isomers	880	1.5	J	3.1		3.2		3.2		1.9	J	2.7	J	9.4	

Notes:

NJDEP = New Jersey Department of Environmental Protection

RAL = Rapid Action Level

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)
associated with the site determined by sampling performed from 2006 to 2015

The samples were analyzed by USEPA Method TO-15 and TO-15 SIM for contaminants of interest

J = Data below calibration curve for that constituent, quantity estimated.
results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for
1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening
level for total xylenes.

0.63 Bold and shaded indicates an analyte concentration equal to
or greater than the NJDEP RAL.

Appendix F-3(B). Indoor Air Analytical Data Compared to NJDEP RALs, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

			Building	Building 9							Building 10								Building 11	
			Floor	1st Floor				Vacant Basement				1st Floor				2nd Floor			1st Floor	
			Location Description	West Side Utility Room		East Side Storage Room		Northeastern Most Storage Room		Center of Main Room		Suite 1001 - Center of Main Room		Suite 1003 - Center of Reception Area		Suite 1026 - On Staircase in Back of Office			West Side of Main Room	
			Location	Q1-IA-40		Q1-IA-41		Q1-IA-03		Q1-IA-22		Q1-IA-44		Q1-IA-45		Q1-IA-46			Q1-IA-39	
			Field Sample ID	Q1-IA-40-121615		Q1-IA-41-121615		Q1-IA-03-121615		Q1-IA-22-121615		Q1-IA-44-121615		Q1-IA-45-121615		Q1-IA-46-121715			Q1-IA-39-121615	
			Sample Date	12/16/2015		12/16/2015		12/16/2015		12/16/2015		12/16/2015		12/16/2015		12/17/2015			12/16/2015	
			Units	µg/m^3		µg/m3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3			µg/m^3	
Cas #	Parameter Name	NJDEP Nonresidential RAL (µg/m^3)																		
71-43-2	Benzene	200		0.58		0.51		0.54		0.66		0.65		0.57		0.97			0.53	
100-41-4	Ethylbenzene	500		0.23	J	0.22	J	0.23	J	0.20	J	0.43	J	0.33	J	0.60	J		0.34	J
91-20-3	Naphthalene	26		0.25		0.16		0.18		0.036		0.098		0.41		0.91			0.31	
79-01-6	Trichloroethene	18		0.035	J	0.040	J	0.035	J	0.037	J	0.18		0.099	J	0.14	J		0.041	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		0.32	J	0.30	J	0.28	J	0.20	J	0.45	J	0.46	J	0.50	J		0.47	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		0.088	J	0.085	J	0.090	J	0.087	J	0.14	J	0.14	J	0.15	J		0.13	J
108-38-3	o-Xylene[2]	Not Available		0.32	J	0.31	J	0.27	J	0.25	J	0.50	J	0.45	J	0.56	J		0.49	J
Not Available	m&p-Xylene[2]	Not Available		0.75		0.73		0.62	J	0.62	J	1.4		1.2		1.5			1.8	
1330-20-7	Xylenes (total) - sum of isomers	880		1.1	J	1.0	J	0.89	J	0.87	J	1.9	J	1.7	J	2.1	J		2.3	J

Notes:

NJDEP = New Jersey Department of Environmental Protection

RAL = Rapid Action Level

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)
associated with the site determined by sampling performed from 2006 to 2015

The samples were analyzed by USEPA Method TO-15 and TO-15 SIM for contaminants of interest

J = Data below calibration curve for that constituent, quantity estimated.
results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for
1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening
level for total xylenes.

0.63 Bold and shaded indicates an analyte concentration equal to
or greater than the NJDEP RAL.

Appendix F-3(C-1). Indoor Air Analytical Data Compared to EPA Commercial Air Risk-Based Screening Levels, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

Building							**Building 2**		**Building 3**				**Building 4**		**Building 6**		
Floor						**Outdoor Air Data[a]**	**1st Floor**		**Vacant 2nd Floor**				**1st Floor**		**1st Floor**		
Location Description						**103 RR, 115 RR, and 163 ORR**	**Center of main open space**		**Center of Bldg, South Side of Office**				**Conference Room On Side Table**		**North Side Storage Room**		
Location						**Range of All Data**	**Q1-IA-32**		**Q1-IA-13**				**Q1-IA-35**		**Q1-IA-28**		
Field Sample ID							**Q1-IA-32-121715**		**Q1-IA-13-121715**		**Q1-DUP3-121715**		**Q1-IA-35-121715**		**QI-IA-28-121715**		
Sample Date						**12/14/2015 - 12/18/2015**	**12/17/2015**		**12/17/2015**				**12/17/2015**		**12/17/2015**		
Units						**µg/m^3**	**µg/m3**		**µg/m^3**		**µg/m3**		**µg/m3**		**µg/m^3**		
		Commercial IASLs															
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-5} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**												
71-43-2	Benzene	1.6	16	160	130	0.50 - 1.2	1.1		2.0		2.0		2.2		1.0		
100-41-4	Ethylbenzene	4.9	49	490	4,400	0.15 J - 0.35 J	0.81		1.8		1.7		0.85		0.68	J	
91-20-3	Naphthalene	0.36	3.6	36	13	0.070 - 0.84	1.1		1.2		1.2		1.2		0.26		
79-01-6	Trichloroethene	3.0	30	300	8.8	0.019 J - 0.071 J	0.057	J	0.084	J	0.061	J	0.066	J	0.095	J	
95-63-6	1,2,4-Trimethylbenzene	Not Available			31	0.19 J - 0.57 J	0.98		1.8		2.0		1.2		0.64	J	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			31	0.059 J - 0.17 J	0.28	J	0.51	J	0.57	J	0.32	J	0.19	J	
108-38-3	o-Xylene	Not Available			440	0.16 J - 0.45 J	0.97		2.0		2.0		1.0		0.76		
Not Available	m&p-Xylene[2]	Not Available				0.43 J - 1.2	2.6		5.9		5.8		2.7		2.2		
1330-20-7	Xylenes (total) - sum of isomers	Not Available			440	0.59 J - 1.7 J	3.6		7.9		7.8		3.7		3.0		

Notes:

IASL = Indoor Air Screening Level

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commerical Air.
The samples were analyzed by USEPA Method TO-15 and TO-15 SIM for contaminants of interest
J = Data below calibration curve for that constituent, quantity estimated.
NA = Not Available

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

0.63 Bold and shaded indicates the value is greater than or equal to the 10^{-4} target risk IASL or HQ=1 target risk IASL and greater than outdoor air concentrations.

Appendix F-3(C-1). Indoor Air Analytical Data Compared to EPA Commercial Air Risk-Based Screening Levels, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

						Building		**Building 7**						**Building 7/8**									
						Floor	**Outdoor Air Data[a]**	**1st Floor**						**Vacant Basement**									
						Location Description	**103 RR, 115 RR, and 163 ORR**	**Main Room - East Side**		**Main Room - West Side**		**Hallway Near Sump 2**		**Far East Room - Next to Flr Drain**		**Far West Room - Next to Elevator Shaft**				**West Side Main Room by Sump 1**			
						Location	**Range of All Data**	**Q1-IA-36**		**Q1-IA-37**		**Q1-IA-21**		**Q1-IA-23**		**Q1-IA-24**				**Q1-IA-25**			
						Field Sample ID		**Q1-IA-36-121715**		**QI-IA-37-121615**		**Q1-IA-21-121615**		**Q1-IA-23-121615**		**Q1-IA-24-121615**		**Q1-DUP1-121615**		**Q1-IA-25-121615**			
						Sample Date	**12/14/2015 - 12/18/2015**	**12/17/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**				**12/16/2015**			
						Units	**µg/m³**	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**			
		Commercial IASLs																					
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-5} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																		
71-43-2	Benzene	1.6	16	160	130		0.50 - 1.2	0.93		0.57		1.4		0.79		2.3		2.6		1.2			
100-41-4	Ethylbenzene	4.9	49	490	4,400		0.15 J - 0.35 J	0.47	J	0.25	J	0.79		0.72		2.3		2.3		1.0			
91-20-3	Naphthalene	0.36	3.6	36	13		0.070 - 0.84	0.65		0.31		0.66		0.37		4.0		3.2		1.1			
79-01-6	Trichloroethene	3.0	30	300	8.8		0.019 J - 0.071 J	0.057	J	0.028	J	0.022	J	1.4		0.036	J	0.034	J	0.037	J		
95-63-6	1,2,4-Trimethylbenzene	Not Available			31		0.19 J - 0.57 J	0.65	J	0.39	J	0.53	J	0.73		1.3		1.2		0.70	J		
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			31		0.059 J - 0.17 J	0.21	J	0.12	J	0.17	J	0.21	J	0.41	J	0.38	J	0.23	J		
108-38-3	o-Xylene	Not Available			440		0.16 J - 0.45 J	0.57	J	0.33	J	0.54	J	0.82		1.3		1.3		0.69	J		
Not Available	m&p-Xylene[2]	Not Available					0.43 J - 1.2	1.5		0.80		1.0		2.3		1.9		1.9		1.2			
1330-20-7	Xylenes (total) - sum of isomers	Not Available			440		0.59 J - 1.7 J	2.1	J	1.1	J	1.5	J	3.1		3.2		3.2		1.9	J		

Notes:

IASL = Indoor Air Screening Level

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commerical Air.
The samples were analyzed by USEPA Method TO-15 and TO-15 SIM for contaminants of interest
J = Data below calibration curve for that constituent, quantity estimated.
NA = Not Available

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

0.63 Bold and shaded indicates the value is greater than or equal to the 10^{-4} target risk IASL or HQ=1 target risk IASL and greater than outdoor air concentrations.

Appendix F-3(C-1). Indoor Air Analytical Data Compared to EPA Commercial Air Risk-Based Screening Levels, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

Building							**Building 8**				**Building 9**								**Building 10**										**Building 11**			
Floor						**Outdoor Air Data[a]**	**2nd Floor**		**3rd Floor**		**1st Floor**				**Vacant Basement**				**1st Floor**						**2nd Floor**		**1st Floor**			
Location Description						**103 RR, 115 RR, and 163 ORR**	**Suite 824 - Inner Office Near Elevator**		**Suite 830 - Entrance Area Near Elevator**		**West Side Utility Room**		**East Side Storage Room**		**Northeastern Most Storage Room**		**Center of Main Room**		**Suite 1001 - Center of Main Room**		**Suite 1003 - Center of Reception Area**		**Suite 1026 - On Staircase in Back of Office**		**West Side of Main Room**			
Location						**Range of All Data**	**Q1-IA-42**		**Q1-IA-43**		**Q1-IA-40**		**Q1-IA-41**		**Q1-IA-03**		**Q1-IA-22**		**Q1-IA-44**		**Q1-IA-45**		**Q1-IA-46**		**Q1-IA-39**			
Field Sample ID							**Q1-IA-42-121615**		**Q1-IA-43-121815**		**Q1-IA-40-121615**		**Q1-IA-41-121615**		**Q1-IA-03-121615**		**Q1-IA-22-121615**		**Q1-IA-44-121615**		**Q1-IA-45-121615**		**Q1-IA-46-121715**		**Q1-IA-39-121615**			
Sample Date						**12/14/2015 - 12/18/2015**	**12/16/2015**		**12/18/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**		**12/17/2015**		**12/16/2015**			
Units						**µg/m³**	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m3**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**			
		Commercial IASLs																													
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**		**10^{-5} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																									
71-43-2	Benzene	1.6		16	160	130	0.50 - 1.2	0.64		0.86		0.58		0.51		0.54		0.66		0.65		0.57		0.97		0.53			
100-41-4	Ethylbenzene	4.9		49	490	4,400	0.15 J - 0.35 J	0.65	J	2.1		0.23	J	0.22	J	0.23	J	0.20	J	0.43	J	0.33	J	0.60	J	0.34	J		
91-20-3	Naphthalene	0.36		3.6	36	13	0.070 - 0.84	0.62		3.8	J	0.25		0.16		0.18		0.036		0.098		0.41		0.91		0.31			
79-01-6	Trichloroethene	3.0		30	300	8.8	0.019 J - 0.071 J	0.090	J	0.67		0.035	J	0.040	J	0.035	J	0.037	J	0.18		0.099	J	0.14	J	0.041	J		
95-63-6	1,2,4-Trimethylbenzene	Not Available				31	0.19 J - 0.57 J	0.59	J	6.8		0.32	J	0.30	J	0.28	J	0.20	J	0.45	J	0.46	J	0.50	J	0.47	J		
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available				31	0.059 J - 0.17 J	0.17	J	2.3		0.088	J	0.085	J	0.090	J	0.087	J	0.14	J	0.14	J	0.15	J	0.13	J		
108-38-3	o-Xylene	Not Available				440	0.16 J - 0.45 J	0.72	J	2.5		0.32	J	0.31	J	0.27	J	0.25	J	0.50	J	0.45	J	0.56	J	0.49	J		
Not Available	m&p-Xylene[2]	Not Available					0.43 J - 1.2	2.0		6.9		0.75		0.73		0.62	J	0.62	J	1.4		1.2		1.5		1.8			
1330-20-7	Xylenes (total) - sum of isomers	Not Available				440	0.59 J - 1.7 J	2.7	J	9.4		1.1	J	1.0	J	0.89	J	0.87	J	1.9	J	1.7	J	2.1	J	2.3	J		

Notes:

IASL = Indoor Air Screening Level

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commerical Air.
The samples were analyzed by USEPA Method TO-15 and TO-15 SIM for contaminants of interest
J = Data below calibration curve for that constituent, quantity estimated.
NA = Not Available

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

0.63 Bold and shaded indicates the value is greater than or equal to the 10^{-4} target risk IASL or HQ=1 target risk IASL and greater than outdoor air concentrations.

Appendix F-3(C-2). Indoor Air Analytical Data Compared to NJDEP Non-Residential Screening Levels, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

Building			Building 2		Building 3				Building 4		Building 6	
Floor		Outdoor Air Data[a]	1st Floor		Vacant 2nd Floor				1st Floor		1st Floor	
Location Description		103 RR, 115 RR, and 163 ORR	Center of main open space		Center of Bldg, South Side of Office				Conference Room On Side Table		North Side Storage Room	
Location		Range of All Data	Q1-IA-32		Q1-IA-13				Q1-IA-35		Q1-IA-28	
Field Sample ID			Q1-IA-32-121715		Q1-IA-13-121715		Q1-DUP3-121715		Q1-IA-35-121715		QI-IA-28-121715	
Sample Date		12/14/2015 - 12/18/2015	12/17/2015		12/17/2015				12/17/2015		12/17/2015	
Units		µg/m³	µg/m3		µg/m³		µg/m3		µg/m3		µg/m³	
Cas #	Parameter Name	NJDEP Nonresidential IASL (µg/m³)										
71-43-2	Benzene	2	0.50 - 1.2	1.1		**2.0**		**2.0**		**2.2**		1.0	
100-41-4	Ethylbenzene	5	0.15 J - 0.35 J	0.81		1.8		1.7		0.85		0.68	J
91-20-3	Naphthalene	3	0.070 - 0.84	1.1		1.2		1.2		1.2		0.26	
79-01-6	Trichloroethene	3	0.019 J - 0.071 J	0.057	J	0.084	J	0.061	J	0.066	J	0.095	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.19 J - 0.57 J	0.98		1.8		2.0		1.2		0.64	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.059 J - 0.17 J	0.28	J	0.51	J	0.57	J	0.32	J	0.19	J
108-38-3	o-Xylene[2]	Not Available	0.16 J - 0.45 J	0.97		2.0		2.0		1.0		0.76	
NA	m&p-Xylene[2]	Not Available	0.43 J - 1.2	2.6		5.9		5.8		2.7		2.2	
1330-20-7	Xylenes (total) - sum of isomers	440	0.59 J - 1.7 J	3.6		7.9		7.8		3.7		3.0	

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential IASL and greater than measured outdoor air concentrations.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

NJDEP Generic IASLs are from the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-3(C-2). Indoor Air Analytical Data Compared to NJDEP Non-Residential Screening Levels, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

		Building		**Building 7**				**Building 7/8**											
		Floor		**1st Floor**				**Vacant Basement**											
		Location Description	**103 RR, 115 RR, and 163 ORR**	**Main Room - East Side**		**Main Room - West Side**		**Hallway Near Sump 2**		**Far East Room - Next to Flr Drain**		**Far West Room - Next to Elevator Shaft**				**West Side Main Room by Sump 1**	
		Location	**Range of All Data**	**Q1-IA-36**		**Q1-IA-37**		**Q1-IA-21**		**Q1-IA-23**		**Q1-IA-24**				**Q1-IA-25**	
		Field Sample ID		**Q1-IA-36-121715**		**QI-IA-37-121615**		**Q1-IA-21-121615**		**Q1-IA-23-121615**		**Q1-IA-24-121615**		**Q1-DUP1-121615**		**Q1-IA-25-121615**	
		Sample Date	**12/14/2015 - 12/18/2015**	**12/17/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**		**12/16/2015**				**12/16/2015**	
		Units	**µg/m³**	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
Cas #	**Parameter Name**	**NJDEP Nonresidential IASL (µg/m³)**																	
71-43-2	Benzene	2	0.50 - 1.2	0.93		0.57		1.4		0.79		**2.3**		**2.6**		1.2	
100-41-4	Ethylbenzene	5	0.15 J - 0.35 J	0.47	J	0.25	J	0.79		0.72		2.3		2.3		1.0	
91-20-3	Naphthalene	3	0.070 - 0.84	0.65		0.31		0.66		0.37		**4.0**		**3.2**		1.1	
79-01-6	Trichloroethene	3	0.019 J - 0.071 J	0.057	J	0.028	J	0.022	J	1.4		0.036	J	0.034	J	0.037	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.19 J - 0.57 J	0.65	J	0.39	J	0.53	J	0.73		1.3		1.2		0.70	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.059 J - 0.17 J	0.21	J	0.12	J	0.17	J	0.21	J	0.41	J	0.38	J	0.23	J
108-38-3	o-Xylene[2]	Not Available	0.16 J - 0.45 J	0.57	J	0.33	J	0.54	J	0.82		1.3		1.3		0.69	J
NA	m&p-Xylene[2]	Not Available	0.43 J - 1.2	1.5		0.80		1.0		2.3		1.9		1.9		1.2	
1330-20-7	Xylenes (total) - sum of isomers	440	0.59 J - 1.7 J	2.1	J	1.1	J	1.5	J	3.1		3.2		3.2		1.9	J

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential IASL and greater than measured outdoor air concentrations.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

NJDEP Generic IASLs are from the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-3(C-2). Indoor Air Analytical Data Compared to NJDEP Non-Residential Screening Levels, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

Building			Building 8				Building 9				Building 10							
Floor		Outdoor Air Data[a]	2nd Floor		3rd Floor		1st Floor				Vacant Basement				1st Floor			2nd Floor
Location Description		103 RR, 115 RR, and 163 ORR	Suite 824 - Inner Office Near Elevator		Suite 830 - Entrance Area Near Elevator		West Side Utility Room		East Side Storage Room		Northeastern Most Storage Room		Center of Main Room		Suite 1001 - Center of Main Room		Suite 1003 - Center of Reception Area	Suite 1026 - On Staircase in Back of Office
Location		Range of All Data	Q1-IA-42		Q1-IA-43		Q1-IA-40		Q1-IA-41		Q1-IA-03		Q1-IA-22		Q1-IA-44		Q1-IA-45	Q1-IA-46
Field Sample ID			Q1-IA-42-121615		Q1-IA-43-121815		Q1-IA-40-121615		Q1-IA-41-121615		Q1-IA-03-121615		Q1-IA-22-121615		Q1-IA-44-121615		Q1-IA-45-121615	Q1-IA-46-121715
Sample Date		12/14/2015 - 12/18/2015	12/16/2015		12/18/2015		12/16/2015		12/16/2015		12/16/2015		12/16/2015		12/16/2015		12/16/2015	12/17/2015
Units		µg/m^3	µg/m^3		µg/m^3		µg/m^3		µg/m3		µg/m^3		µg/m^3		µg/m^3		µg/m^3	µg/m^3
Cas #	Parameter Name	NJDEP Nonresidential IASL (µg/m^3)																
71-43-2	Benzene	2	0.50 - 1.2	0.64		0.86		0.58		0.51		0.54		0.66		0.65		0.57		0.97	
100-41-4	Ethylbenzene	5	0.15 J - 0.35 J	0.65	J	2.1		0.23	J	0.22	J	0.23	J	0.20	J	0.43	J	0.33	J	0.60	J
91-20-3	Naphthalene	3	0.070 - 0.84	0.62		**3.8**	J	0.25		0.16		0.18		0.036		0.098		0.41		0.91	
79-01-6	Trichloroethene	3	0.019 J - 0.071 J	0.090	J	0.67		0.035	J	0.040	J	0.035	J	0.037	J	0.18		0.099	J	0.14	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.19 J - 0.57 J	0.59	J	6.8		0.32	J	0.30	J	0.28	J	0.20	J	0.45	J	0.46	J	0.50	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.059 J - 0.17 J	0.17	J	2.3		0.088	J	0.085	J	0.090	J	0.087	J	0.14	J	0.14	J	0.15	J
108-38-3	o-Xylene[2]	Not Available	0.16 J - 0.45 J	0.72	J	2.5		0.32	J	0.31	J	0.27	J	0.25	J	0.50	J	0.45	J	0.56	J
NA	m&p-Xylene[2]	Not Available	0.43 J - 1.2	2.0		6.9		0.75		0.73		0.62	J	0.62	J	1.4		1.2		1.5	
1330-20-7	Xylenes (total) - sum of isomers	440	0.59 J - 1.7 J	2.7	J	9.4		1.1	J	1.0	J	0.89	J	0.87	J	1.9	J	1.7	J	2.1	j

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential IASL and greater than measured outdoor air concentrations.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

NJDEP Generic IASLs are from the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-3(C-2). Indoor Air Analytical Data Compared to NJDEP Non-Residential Screening Levels, December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

	Building			**Building 11**	
	Floor		**Outdoor Air Data[a]**	**1st Floor**	
	Location Description		**103 RR, 115 RR, and 163 ORR**	**West Side of Main Room**	
	Location		**Range of All Data**	**Q1-IA-39**	
	Field Sample ID			**Q1-IA-39-121615**	
	Sample Date		**12/14/2015 - 12/18/2015**	**12/16/2015**	
	Units		**µg/m³**	**µg/m³**	
Cas #	**Parameter Name**	**NJDEP Nonresidential IASL (µg/m³)**			
71-43-2	Benzene	2	0.50 - 1.2	0.53	
100-41-4	Ethylbenzene	5	0.15 J - 0.35 J	0.34	J
91-20-3	Naphthalene	3	0.070 - 0.84	0.31	
79-01-6	Trichloroethene	3	0.019 J - 0.071 J	0.041	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.19 J - 0.57 J	0.47	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.059 J - 0.17 J	0.13	J
108-38-3	o-Xylene[2]	Not Available	0.16 J - 0.45 J	0.49	J
NA	m&p-Xylene[2]	Not Available	0.43 J - 1.2	1.8	
1330-20-7	Xylenes (total) - sum of isomers	440	0.59 J - 1.7 J	2.3	J

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential IASL and greater than measured outdoor air concentrations.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

NJDEP Generic IASLs are from the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-3(D-1). Crawl Space Air Analytical Data Compared to EPA Commercial Air Risk-Based Screening Levels - December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

						Building		**Building 6**				**Building 4**		**Building 3**		**Building 2**	
						Location	**Outdoor Air Data[a]**	**Q1-CS-01**				**Q1-CS-04**		**Q1-CS-05**		**Q1-CS-07**	
						Location Description	**103 RR, 115 RR, and 163 ORR**	**Northwest Side (through vent opening in Bldg 7/8 basement)**				**South Side (through exterior vent)**		**Center of Bldg (through hole in floor)**		**South Side (through exterior vent)**	
						Field Sample ID	**Range of All Data**	**Q1-CS-01-121715**		**Q1-DUP2-121715**		**Q1-CS-04-121715**		**Q1-CS-05-121715**		**Q1-CS-07-121715**	
						Sample Date	**12/14/2015 - 12/18/2015**	**12/17/2015**				**12/1715**		**12/17/2015**		**12/17/2015**	
						Units	**µg/m³**	**µg/m³**		**µg/m³**		**µg/m3**		**µg/m3**		**µg/m3**	
		Commercial IASLs															
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-5} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**												
71-43-2	Benzene	1.6	16	160	130		0.50 - 1.2	1.1		1.1		0.85		1.9		0.80	
100-41-4	Ethylbenzene	4.9	49	490	4,400		0.15 J - 0.35 J	0.95		0.79		0.37	J	0.34	J	0.35	J
91-20-3	Naphthalene	0.36	3.6	36	13		0.070 - 0.84	0.43	J	0.15	J	1.1		0.55		0.22	
79-01-6	Trichloroethene	3.0	30	300	8.8		0.019 J - 0.071 J	0.61		0.61		0.053	J	0.035	J	0.041	J
95-63-6	1,2,4-Trimethylbenzene	Not Available			31		0.19 J - 0.57 J	1.0		0.67	J	0.49	J	0.38	J	0.45	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			31		0.059 J - 0.17 J	0.33	J	0.23	J	0.14	J	0.12	J	0.13	J
108-38-3	o-Xylene	Not Available			440		0.16 J - 0.45 J	1.1		0.90		0.48	J	0.43	J	0.44	J
NA	m&p-Xylene[2]	Not Available					0.43 J - 1.2	3.2		2.5		1.1		1.1		1.2	
1330-20-7	Xylenes (total) - sum of isomers	Not Available			440		0.59 J - 1.7 J	4.3		3.4		1.6	J	1.5	J	1.6	J

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the 10^{-4} target risk IASL or HQ=1 target risk IASL and greater than outdoor air concentrations.

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

NA = Not applicable

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

[1] = An RSL is not available for 1,3,5-trimethylbenzene; the RSL for 1,2,4-trimethylbenzene was considered an evaluation surrogate for 1,3,5-trimethylbenzene

[2] = m&p-Xylene were added to o-xylene and compared to the screening levels for total xylenes.

Appendix F-3(D-2). Crawl Space Air Analytical Data Compared to NJDEP Non-Residential Screening Levels - December 2015

115 River Road Building

Quanta Site, Edgewater, New Jersey

		Building		**Building 6**				**Building 4**		**Building 3**		**Building 2**			
		Location	**Outdoor Air Data[a]**	**Q1-CS-01**				**Q1-CS-04**		**Q1-CS-05**		**Q1-CS-07**			
		Location Description	**103 RR, 115 RR, and 163 ORR**	**Northwest Side (through vent opening in Bldg 7/8 basement)**				**South Side (through exterior vent)**		**Center of Bldg (through hole in floor)**		**South Side (through exterior vent)**			
		Field Sample ID	**Range of All Data**	**Q1-CS-01-121715**		**Q1-DUP2-121715**		**Q1-CS-04-121715**		**Q1-CS-05-121715**		**Q1-CS-07-121715**			
		Sample Date	**12/14/2015 - 12/18/2015**	**12/17/2015**				**12/1715**		**12/17/2015**		**12/17/2015**			
		Units	**µg/m^3**	**µg/m^3**		**µg/m^3**		**µg/m3**		**µg/m3**		**µg/m3**			
Cas #	**Parameter Name**	**NJDEP Nonresidential IASL (µg/m^3)**													
71-43-2	Benzene	2	0.50 - 1.2	1.1		1.1		0.85		1.9		0.80			
100-41-4	Ethylbenzene	5	0.15 J - 0.35 J	0.95		0.79		0.37	J	0.34	J	0.35	J		
91-20-3	Naphthalene	3	0.070 - 0.84	0.43	J	0.15	J	1.1		0.55		0.22			
79-01-6	Trichloroethene	3	0.019 J - 0.071 J	0.61		0.61		0.053	J	0.035	J	0.041	J		
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available	0.19 J - 0.57 J	1.0		0.67	J	0.49	J	0.38	J	0.45	J		
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available	0.059 J - 0.17 J	0.33	J	0.23	J	0.14	J	0.12	J	0.13	J		
108-38-3	o-Xylene[2]	Not Available	0.16 J - 0.45 J	1.1		0.90		0.48	J	0.43	J	0.44	J		
NA	m&p-Xylene[2]	Not Available	0.43 J - 1.2	3.2		2.5		1.1		1.1		1.2			
1330-20-7	Xylenes (total) - sum of isomers	440	0.59 J - 1.7 J	4.3		3.4		1.6	J	1.5	J	1.6	J		

Notes:

0.63 Bold and shaded indicates the value is greater than or equal to the NJDEP Nonresidential IASL and greater than measured outdoor air concentrations

[a] = The inherent spatial and temporal variability in indoor and outdoor air VOC concentrations of up to 13-times observed at the 115 River Road Building since 2006 (see Attachment G) should be considered when comparing indoor and outdoor air concentrations.

NJDEP Generic IASLs are from the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

NJDEP = New Jersey Department of Environmental Protection

IASL = Indoor Air Screening Level

J = Data below calibration curve for that constituent, quantity estimated.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix F-3(F). Outdoor Air Analytical Data - December 2015

All Three Buildings - 115 River Road, 163 Old River Road, and 103 River Road

Quanta Site, Edgewater, New Jersey

	Building	115 River Road								163 Old River Road				103 River Road				Outdoor Air Data
	Location	Q1-OA-03		Q1-OA-06		Q1-OA-09		Q1-OA-10		Q2-OA-01		Q2-OA-02		Q3-OA-01		Q3-OA-02		
	Location Description	South Parking Lot - on Fence		NE Corner at Bulkhead		South of Bldg - Next to River		NW Corner of Bldg 12		South Side of 163 ORR Building		Northwest of 163 ORR Parking Lot		North Side of 103 RR Building		SW Corner of the 103 RR Building		103 RR, 115 RR, and 163 ORR
	Field Sample ID	Q1-OA-03-121615		Q1-OA-06-121615		Q1-OA-09-121715		Q1-OA-10-121715		Q2-OA-01-121515		Q2-OA-02-121515		Q3-OA-01-121815		Q3-OA-02-121815		Range of All Data
	Sample Date	12/16/2015		12/16/2015		12/17/2015		12/17/2015		12/15/2015		12/15/2015		12/18/2015		12/18/2015		12/14/2015 - 12/18/2015
	Units	µg/m^3		µg/m3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3
Cas #	Parameter Name																	
71-43-2	Benzene	0.53		0.50		0.85		0.87		0.55		0.61		0.86		1.2		0.50 - 1.2
100-41-4	Ethylbenzene	0.16	J	0.15	J	0.26	J	0.31	J	0.23	J	0.28	J	0.35	J	0.35	J	0.15 J - 0.35 J
91-20-3	Naphthalene	0.11		0.84		0.070		0.15		0.17		0.17		0.13	J	0.33	J	0.070 - 0.84
79-01-6	Trichloroethene	0.019	J	0.019	J	0.071	J	0.035	J	0.024	J	0.027	J	0.042	J	0.044	J	0.019 J - 0.071 J
95-63-6	1,2,4-Trimethylbenzene	0.23	J	0.19	J	0.32	J	0.34	J	0.29	J	0.32	J	0.40	J	0.57	J	0.19 J - 0.57 J
108-67-8	1,3,5-Trimethylbenzene	0.066	J	0.059	J	0.091	J	0.093	J	0.079	J	0.093	J	0.11	J	0.17	J	0.059 J - 0.17 J
108-38-3	o-Xylene	0.20	J	0.16	J	0.32	J	0.37	J	0.28	J	0.31	J	0.41	J	0.45	J	0.16 J - 0.45 J
NA	m&p-Xylene	0.51	J	0.43	J	0.90		0.96		0.78		0.93		1.1		1.2		0.43 J - 1.2
1330-20-7	Xylenes (total) - sum of isomers	0.71	J	0.59	J	1.2	J	1.3	J	1.1	J	1.2	J	1.5	J	1.7	J	0.59 J - 1.7 J

Notes:

J = Data below calibration curve for that constituent, quantity estimated.

Appendix G
Historical Analytical Results

Appendix G-1(A) - 163 Old River Road Historical Air Data

Indoor Air Analytical Data - March 2008, March 2009, May 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Location	**Q2-IA-01**																												
					Location Description	**1st floor kitchen**																												
					Field Sample ID	**Q2-IA-01-032508**		**Q2-DUP1-032508**		**Q2-IA-01-031709**		**Q2-DUP1-031709**		**Q2-IA-01-052510**		**Q2-DUP1-052510**		**Q2-IA-01-030811**		**Q2-DUP1-030811**		**Q2-IA-01-040312**		**Q2-IA-01-031913**		**Q2-IA-01-121713**		**Q2-IA-01-031015**		**Q2-IA-01-121515**	
					Sample Date	**3/25/2008**				**3/17/2009**				**5/25/2010**				**3/8/2011**				**4/3/2012**		**3/19/2013**		**12/17/2013**		**3/10/2015**		**12/15/2015**	
					Units	**µg/m³**				**µg/m³**				**µg/m³**				**µg/m³**				**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m3**	
		EPA Commercial IASLs			**NJDEP Nonresidential IASL (µg/m³)**																												
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																													
71-43-2	Benzene	1.6	160	130	2	1.0		0.85		1.0		1.2		1.3		1.3		0.58		0.59		0.47		0.57		0.94		1.6		0.66	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.65	J	0.57	J	0.40	J	0.42	J	1.1		1.0		0.22	J	0.23	J	0.25	J	0.78	U	0.31	J	0.92		0.83	
91-20-3	Naphthalene	0.36	36	13	3	0.62		0.38		0.40		0.43		1.2		1.6		0.36		0.43		0.20		0.10		0.16	L	0.33		0.70	
79-01-6	Trichloroethene	3.0	300	8.8	3	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.76	U	0.065		0.035	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		31	Not Available	1.0		0.91	J	0.52	J	0.58	J	1.4		1.4		0.60	J	0.62	J	0.28	J	0.25	J	0.46	J	1.3		0.69	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.38	J	0.30	J	0.19	J	0.22	J	0.59	J	0.55	J	0.25	J	0.28	J	0.78	U	0.78	U	0.76	U	0.40		0.24	J
108-38-3	o-Xylene[2]	Not Available		440	Not Available	0.97		0.86	J	0.49	J	0.50	J	0.98		1.0		0.27	J	0.28	J	0.35	J	0.78	U	0.38	J	1.3		0.81	
NA	m&p-Xylene[2]	Not Available			Not Available	2.5		2.3		1.2		1.3		3.4		3.2		0.80		0.85		0.89		0.51	J	0.95		3.2		2.1	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	3.5		3.2		1.7		1.8		4.4		4.2		1.1	J	1.1	J	1.2	J	0.5	J	1.3	J	4.5		2.9	

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix G-1(A) - 163 Old River Road Historical Air Data
Indoor Air Analytical Data - March 2008, March 2009, May 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015
Quanta Site, Edgewater, New Jersey

Cas #	Parameter Name	EPA Commercial IASLs: 10^{-6} Target Risk (µg/m³)	EPA Commercial IASLs: 10^{-4} Target Risk (µg/m³)	EPA Commercial IASLs: HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)
71-43-2	Benzene	1.6	160	130	2
100-41-4	Ethylbenzene	4.9	490	4,400	5
91-20-3	Naphthalene	0.36	36	13	3
79-01-6	Trichloroethene	3.0	300	8.8	3
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		31	Not Available
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available
108-38-3	o-Xylene[2]	Not Available		440	Not Available
NA	m&p-Xylene[2]	Not Available			Not Available
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440

Location: Q2-IA-02 — Location Description: 1st floor dining Room

Cas #	Parameter Name	Q2-IA-02-032508 3/25/2008 µg/m³		Q2-IA-02-031709 3/17/2009 µg/m³		Q2-IA-02-052510 5/25/2010 µg/m³		Q2-IA-02-030811 3/8/2011 µg/m³		Q2-IA-02-041012 4/10/2012 µg/m³	
71-43-2	Benzene	0.76		1.1		1.2		0.54		0.45	
100-41-4	Ethylbenzene	0.35	J	0.41	J	0.86		0.16	J	0.73	U
91-20-3	Naphthalene	0.32		0.22	J	0.34		0.12		0.094	
79-01-6	Trichloroethene	NA		NA		NA		NA		NA	
95-63-6	1,2,4-Trimethylbenzene[1]	0.41	J	0.44	J	0.82		0.28	J	0.73	U
108-67-8	1,3,5-Trimethylbenzene[1]	0.95	U	0.16	J	0.30	J	0.60	U	0.73	U
108-38-3	o-Xylene[2]	0.45	J	0.43	J	0.75	J	0.18	J	0.73	U
NA	m&p-Xylene[2]	1.3	J	1.3		2.4		0.51	J	0.50	J
1330-20-7	Xylenes (total) - sum of isomers	1.8		1.7		3.2		0.69	J	0.50	J

Cas #	Parameter Name	Q2-IA-02-031913 3/19/2013 µg/m³		Q2-IA-02-121713 12/17/2013 µg/m³		Q2-IA-02-031015 3/10/2015 µg/m³		Q2-IA-02-121515 12/15/2015 µg/m3	
71-43-2	Benzene	0.55		0.87		1.5		0.64	
100-41-4	Ethylbenzene	0.80	U	0.26	J	0.66		0.36	J
91-20-3	Naphthalene	0.069		0.13	L	0.14		0.28	
79-01-6	Trichloroethene	NA		0.72	U	0.053		0.035	J
95-63-6	1,2,4-Trimethylbenzene[1]	0.80	U	0.29	J	0.82		0.48	J
108-67-8	1,3,5-Trimethylbenzene[1]	0.80	U	0.72	U	0.24		0.14	J
108-38-3	o-Xylene[2]	0.68	J	0.29	J	0.87		0.42	J
NA	m&p-Xylene[2]	0.95		0.76		2.3		1.2	
1330-20-7	Xylenes (total) - sum of isomers	1.6	J	1.1	J	3.2		1.6	J

Location: Q2-IA-03 — Location Description: 2nd floor dining room

Cas #	Parameter Name	Q2-IA-03-032508 3/25/2008 µg/m³		Q2-IA-03-031709 3/17/2009 µg/m³		Q2-IA-03-052510 5/25/2010 µg/m³	
71-43-2	Benzene	0.81		1.2		1.2	
100-41-4	Ethylbenzene	0.43	J	0.42	J	1.1	
91-20-3	Naphthalene	0.42		0.75		1.5	
79-01-6	Trichloroethene	NA		NA		NA	
95-63-6	1,2,4-Trimethylbenzene[1]	1.10		0.80		2.4	
108-67-8	1,3,5-Trimethylbenzene[1]	0.38	J	0.29	J	1.0	
108-38-3	o-Xylene[2]	0.61	J	0.51	J	1.1	
NA	m&p-Xylene[2]	1.6		1.3		3.3	
1330-20-7	Xylenes (total) - sum of isomers	2.2		1.8		4.4	

Notes:
Shaded indicates the value is greater than or equal to one or more of the IASLs.
NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)
The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.
U = Below the laboratory method detection limits
J = Data below calibration curve for that constituent, quantity estimated.
L = Laboratory control sample recovery outside the client specified limits; results may be biased low.
NA = Not analyzed
[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.
[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix G-1(A) - 163 Old River Road Historical Air Data

Indoor Air Analytical Data - March 2008, March 2009, May 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Location	**Q2-IA-03**																				
						Location Description	**2nd floor dining room**																				
						Field Sample ID	**Q2-IA-03-030811**		**Q2-IA-03-040312**		**Q2-DUP1-040312**		**Q2-IA-03-031913**		**Q2-DUP1-031913**		**Q2-IA-03-121713**		**Q2-DUP1-121713**		**Q2-IA-03-031015**		**Q2-DUP1-031015**		**Q2-IA-03-121515**		**Q2-DUP1-121515**	
						Sample Date	**3/8/2011**		**4/3/2012**				**3/19/2013**				**12/17/2013**				**3/10/2015**				**12/15/2015**			
						Units	**µg/m³**		**µg/m³**				**µg/m³**				**µg/m³**				**µg/m³**				**µg/m³**			
		EPA Commercial IASLs			**NJDEP Nonresidential IASL (µg/m³)**																							
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																							
71-43-2	Benzene	1.6	160	130	2		0.59		0.47		0.47		0.60		0.54		0.89		0.88		1.5		1.5		0.63	J	1.5	J
100-41-4	Ethylbenzene	4.9	490	4,400	5		0.74	U	0.20	J	0.20	J	0.26	J	0.71	U	0.36	J	0.45	J	0.79	J	1.3	J	0.68	J	0.73	J
91-20-3	Naphthalene	0.36	36	13	3		0.56		0.12		0.13		0.35	J	0.040	J	0.13	L	0.16	L	0.24	J	0.11	J	1.7	J	0.53	J
79-01-6	Trichloroethene	3.0	300	8.8	3		NA		NA		NA		NA		NA		0.69	U	0.80	U	0.053		0.056		0.043	J	0.048	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		31	Not Available		1.6		0.38	J	0.38	J	0.29	J	0.71	U	0.38	J	0.60	J	1.1	J	2.7	J	0.83		0.58	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available		0.81		0.80	U	0.72	U	0.81	U	0.71	U	0.69	U	0.80	U	0.36	J	0.98	J	0.29	J	0.23	J
108-38-3	o-Xylene[2]	Not Available		440	Not Available		0.28	J	0.23	J	0.24	J	0.30	J	0.71	U	0.40	J	0.54	J	1.1	J	2.7	J	0.74		0.76	J
NA	m&p-Xylene[2]	Not Available			Not Available		0.57	J	0.64	J	0.67	J	0.88		0.72		1.2		1.6		2.7	J	5.5	J	2.1		2.2	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440		0.85	J	0.87	J	0.91	J	1.2	J	0.72		1.6	J	2.1	J	3.8		8.2		2.8		3.0	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix G-1(B) - 163 Old River Road Historical Air Data

Subslab Soil Gas Analytical Data - March 2008, March 2009, May 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Cas #	Parameter Name	EPA Commercial SGSLs 10^{-6} Target Risk (µg/m³)	EPA Commercial SGSLs 10^{-4} Target Risk (µg/m³)	EPA Commercial SGSLs HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential SGSL (µg/m³)
71-43-2	Benzene	52	5,200	4,400	79
100-41-4	Ethylbenzene	160	16,000	150,000	250
91-20-3	Naphthalene	12	1,200	440	26
79-01-6	Trichloroethene	100	10,000	290	150
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		1,000	Not Available
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		1,000	Not Available
108-38-3	o-Xylene[2]	Not Available		15,000	Not Available
NA	m&p-Xylene[2]	Not Available			Not Available
1330-20-7	Xylenes (total) - sum of isomers	Not Available		15,000	22,000

Location		Q2-VI-01															
Location Description		Storage Room															
Field Sample ID		Q2-VI-01-032408		Q2-VI-02-031709[4]		Q2-VI-01-052510		Q2-VI-01-040312		Q2-VI-01-031913		Q2-VI-01-121713		Q2-VI-01-031015		Q2-VI-01-121515	
Sample Date		3/24/2008		3/17/2009		5/25/2010		4/3/2012		3/19/2013		12/17/2013		3/10/2015		12/15/2015	
Units		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m3	
Cas #	Parameter Name																
71-43-2	Benzene	1.9	U	1.7		0.67	U	31	U	0.17		0.47		0.45		0.31	
100-41-4	Ethylbenzene	50		5.8		1.3	J	16	J	0.70	J	22		0.73		1.2	
91-20-3	Naphthalene	0.46	J	330		1.7	J	31	U	0.81	U	0.40	J	0.63		0.59	
79-01-6	Trichloroethene	NA		NA		NA		NA		NA		0.24	J	0.044		0.068	J
95-63-6	1,2,4-Trimethylbenzene[1]	25		49		3.5		31	U	1.7		18		1.2		3.4	
108-67-8	1,3,5-Trimethylbenzene[1]	9.0		12		2.4		31	U	1.4		7.9		0.39		0.85	
108-38-3	o-Xylene[2]	66		13		1.7	J	26	J	0.63	J	43		1.3		1.6	
NA	m&p-Xylene[2]	190		20		2.7	J	41	J	2.2		79		2.6		4.6	
1330-20-7	Xylenes (total) - sum of isomers	256		33		4.4	J	67	J	2.8	J	122		3.9		6.2	

Location		Q2-VI-02																	
Location Description		Kitchen																	
Field Sample ID		Q2-VI-02-032508		Q2-VI-01-031709[3]		Q2-VI-02-052510		Q2-VI-02-030811		Q2-VI-02-040312		Q2-VI-02-031913		Q2-VI-02-121713		Q2-VI-02-031015		Q2-VI-02-121515	
Sample Date		3/25/2008		3/17/2009		5/25/2010		3/8/2011		4/3/2012		3/19/2013		12/17/2013		3/10/2015		12/15/2015	
Units		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m3	
Cas #	Parameter Name																		
71-43-2	Benzene	5.9	U	3.4		0.69	J	2.0	U	31	U	1.5	U	1.9		0.96	J	0.34	
100-41-4	Ethylbenzene	1,500		180		150		450		280		210		47		29		11	
91-20-3	Naphthalene	3.2	J	690		5.9		9.8	U	31	U	3.2	J	1.3		0.67		0.73	
79-01-6	Trichloroethene	NA		NA		NA		NA		NA		NA		0.21	J	0.35	U	0.075	J
95-63-6	1,2,4-Trimethylbenzene[1]	2,100		690		590		1,800		1,800		1,500		260	D	13		7.9	
108-67-8	1,3,5-Trimethylbenzene[1]	690		210		240		520		530		330		59		4.2		3.6	
108-38-3	o-Xylene[2]	3,500		500		320		1,200		830		640		120		82		17	
NA	m&p-Xylene[2]	8,100		910		710		2,000		1,300		870		180		84		18	
1330-20-7	Xylenes (total) - sum of isomers	12,000		1,400		1,000		3,200		2,100		1,500		300		170		35	

Notes:

Shaded indicates the value is greater than or equal to one or more of the SGSLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

J = Data below calibration curve for that constituent, quantity estimated.

D = The reported result is from a dilution.

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[3] = The sample IDs were most likely switched in 2009.

Appendix G-1(C) - 163 Old River Road Historical Air Data

Outdoor Air Analytical Data - March 2008, March 2009, May 2010, March 2011, April 2012, March 2013, December 2013, March 2015 and December 2015

Quanta Site, Edgewater, New Jersey

Location		**Q2-OA-01**																						**Q2-OA-02**												
Location Description		**South Side of Building - Chained to Fence**																						**Northwest of 163 oRR parking lot**												
Field Sample ID		**Q2-OA-01-032508**		**Q2-OA-01-031709**		**Q2-OA-01-052510**		**Q2-OA-01-030811**		**Q2-OA-01-040312**		**Q2-OA-01-031913**		**Q2-OA-01-121713**		**Q2-OA-01-031015**		**Q2-OA-01-121515**		**Q2-OA-02-030811**		**Q2-OA-02-040312**		**Q2-OA-01-031913**		**Q2-OA-02-121713**		**Q2-OA-02-031015**		**Q2-OA-02-121515**					
Sample Date		**3/25/2008**		**3/17/2009**		**5/25/2010**		**3/8/2011**		**4/3/2012**		**3/19/2013**		**12/17/2013**		**3/10/2015**		**12/15/2015**		**3/8/2011**		**4/3/2012**		**3/19/2013**		**12/17/2013**		**3/10/2015**		**12/15/2015**					
Units		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m^3**		**µg/m3**					
Cas #	**Parameter Name**	**EPA Commercial IASLs**																																		
71-43-2	Benzene	0.81		1.1		1.3		0.58		0.47		0.48		0.89		1.5		0.55		0.58		0.49		0.52		0.87		1.6		0.61					
100-41-4	Ethylbenzene	0.36	J	0.41	J	1.0		0.66	U	0.77	U	0.64	U	0.29	J	0.67		0.23	J	0.19	J	0.23	J	0.66	U	0.30	J	0.77		0.28	J				
91-20-3	Naphthalene	0.14		0.14	J	0.37		0.10	J	0.41		0.069		0.059	L	0.10		0.17		0.058	J	0.057		0.072		0.047	L	0.093		0.17					
79-01-6	Trichloroethene	NA		NA		NA		NA		NA		NA		0.69	U	0.10		0.024	J	NA		NA		NA		0.67	U	0.061		0.027	J				
95-63-6	1,2,4-Trimethylbenzene	0.37	J	0.43	J	0.97		0.66	U	0.77	U	0.34	J	0.32	J	0.96		0.29	J	0.17	J	0.72	U	0.22	J	0.56	J	1.2		0.32	J				
108-67-8	1,3,5-Trimethylbenzene	Not Available		0.20	J	0.34	J	0.66	U	0.77	U	0.64	U	0.69	U	0.29		0.079	J	0.63	U	0.72	U	0.66	U	0.21	J	0.39		0.093	J				
108-38-3	o-Xylene	Not Available		0.45	J	0.86		0.66	U	0.21	J	0.64	U	0.33	J	0.90		0.28	J	0.21	J	0.23	J	0.66	U	0.35	J	1.1		0.31	J				
NA	m&p-Xylene	Not Available		1.3		2.9		0.48	J	0.58	J	0.39	J	0.87		2.2		0.78		0.63		0.71	J	0.66	U	0.92		2.8		0.93					
1330-20-7	Xylenes (total) - sum of isomers	1.6		1.8		3.8		0.48	J	0.79	J	0.39	J	1.2	J	3.1		1.1	J	0.84	J	0.94	J	0.66	U	1.3	J	3.9		1.2	J				
		Not Available																																		

Notes:

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

Appendix G-2(A) - 103 River Road Historical Air Data

Indoor Air Analytical Data - April 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Location	**Q3-IA-01**																
						Location Description	**Medical Office Storage Room**																
						Field Sample ID	**Q3-IA-01-040610[a]**		**Q3-DUP1-040610[a]**		**Q3-IA-01-030411**		**Q3-DUP1-030411**		**Q3-IA-01-040312**		**Q3-IA-01-032113**		**Q3-IA-01-121913**		**Q3-IA-01-031315**		**Q3-IA-01-121815**	
						Sample Date	**4/6/2010**				**3/4/2011**				**4/3/2012**		**3/21/2013**		**12/19/2013**		**3/13/2015**		**12/18/2015**	
						Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
		EPA Industrial IASLs																					
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																			
71-43-2	Benzene	1.6	160	130	2		2.7		2.4		0.83		0.68		0.55		0.62		0.90		0.48		0.90	
100-41-4	Ethylbenzene	4.9	490	4,400	5		2.0		1.5		0.33	J	0.26	J	0.20	J	0.71	U	0.33	J	0.17		0.45	J
91-20-3	Naphthalene	0.36	36	13	3		2.9	J	0.94	J	0.34	J	0.16	J	0.084		0.096		0.15	B, L	0.10		0.38	J
127-18-4	Tetrachloroethene	47	4,700	180	47		1.1		1.1		0.18		0.16	J	0.16	U	0.14	U	0.18	J	0.39		NA	
79-01-6	Trichloroethene	3.0	300	8.8	3		NA		NA		NA		NA		NA		NA		0.74	U	NA		0.059	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		31	Not Available		1.2	J	0.69	J	0.28	J	0.25	J	0.80	U	0.24	J	0.37	J	0.30		0.79	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available		0.54	J	0.098	UJ	0.72	U	0.82	U	0.80	U	0.71	U	0.74	U	0.082	J	0.23	J
108-38-3	o-Xylene[2]	Not Available		440	Not Available		2.3		1.7		0.27	J	0.23	J	0.22	J	0.24	J	0.40	J	0.22		0.56	J
NA	m&p-Xylene[2]	Not Available			Not Available		5.2		3.9		1.0		0.81	J	0.59	J	0.58	J	0.94		0.54		1.4	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440		7.4		5.6		1.3	J	1.0	J	0.81	J	0.82	J	1.3	J	0.76		2.0	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

[a] = The indoor and outdoor air analytical data from April 2010 were concluded to be biased high based on the re-sampling conducted at 115 River Road in 2010 (CH2M HILL, 2011b). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in April 2010. The data generated by Accutest were used to make relative comparisons of indoor and outdoor air concentrations during the 2010 sampling event (CH2M HILL, 2011a); however, due to the high bias, the 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations.

[b] = Q3-IA-03 location changed to medical office reception area

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Industrial Air

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

Appendix G-2(A) - 103 River Road Historical Air Data

Indoor Air Analytical Data - April 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Location	**Q3-IA-02**																
						Location Description	**Dentist Office Hallway**																
						Field Sample ID	**Q3-IA-02-040610[a]**		**Q3-IA-02-030411**		**Q3-IA-02-040312**		**Q3-IA-02-032113**		**Q3-IA-02-121913**		**Q3-IA-02-031315**		**Q3-IA-02-121815**			
						Sample Date	**4/6/2010**		**3/4/2011**		**4/3/2012**		**3/21/2013**		**12/19/2013**		**3/13/2015**		**12/18/2015**			
						Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**			
Cas #	**Parameter Name**	**EPA Industrial IASLs**			**NJDEP Nonresidential IASL (µg/m³)**																		
		10^{-6} Target Risk (µg/m³)	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																			
71-43-2	Benzene	1.6	160	130	2		2.3		0.74		0.55		0.58		0.98		0.61		0.96				
100-41-4	Ethylbenzene	4.9	490	4,400	5		1.9		0.33	J	0.35	J	0.39	J	0.76		0.22		0.44	J			
91-20-3	Naphthalene	0.36	36	13	3		2.8		0.21		0.12		0.15		0.28	B, L	0.11		0.30	J			
127-18-4	Tetrachloroethene	47	4,700	180	47		1.1		0.41		0.15	U	0.16	U	0.24	J	0.52		NA				
79-01-6	Trichloroethene	3.0	300	8.8	3		NA		NA		NA		NA		0.76	U	NA		0.046	J			
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		31	Not Available		1.0		0.31	J	0.22	J	0.25	J	0.43	J	0.23		0.53	J			
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available		0.098	U	0.74	U	0.73	U	0.79	U	0.76	U	0.063	J	0.16	J			
108-38-3	o-Xylene[2]	Not Available		440	Not Available		2.4		0.29	J	0.33	J	0.41	J	0.66	J	0.27		0.53	J			
NA	m&p-Xylene[2]	Not Available			Not Available		5.6		0.94		1.0		1.2		1.7		0.72		1.4				
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440		8.3		1.2	J	1.3	J	1.6	J	2.4	J	1.0		1.9	J			

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

[a] = The indoor and outdoor air analytical data from April 2010 were concluded to be biased high based on the re-sampling conducted at 115 River Road in 2010 (CH2M HILL, 2011b). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in April 2010. The data generated by Accutest were used to make relative comparisons of indoor and outdoor air concentrations during the 2010 sampling event (CH2M HILL, 2011a); however, due to the high bias, the 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations.

[b] = Q3-IA-03 location changed to medical office reception area

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Industrial Air

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

Appendix G-2(A) - 103 River Road Historical Air Data

Indoor Air Analytical Data - April 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Location	**Q3-IA-03**												**Q3-IA-04**					
						Location Description	**Medical Office Reception Area[b]**												**Medical Office Utility Room**					
						Field Sample ID	**Q3-IA-03-030411**		**Q3-IA-03-041012**		**Q3-IA-03-032113**		**Q3-IA-03-121913**		**Q3-IA-03-031315**		**Q3-IA-03-121815**		**Q3-IA-03-040610[a]**		**Q3-IA-04-031315**		**Q3-IA-04-121815**	
						Sample Date	**3/4/2011**		**4/10/2012**		**3/21/2013**		**12/19/2013**		**3/13/2015**		**12/18/2015**		**4/6/2010**		**3/13/2015**		**12/18/2015**	
						Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
		EPA Industrial IASLs																					
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																			
71-43-2	Benzene	1.6	160	130	2		0.89		0.54		0.70		1.2		1.1		0.91		4.2		0.64		0.88	
100-41-4	Ethylbenzene	4.9	490	4,400	5		0.85		0.38	J	0.75		0.88		0.25		0.50	J	1.5		0.14	J	0.35	J
91-20-3	Naphthalene	0.36	36	13	3		0.27		0.43		0.52		0.29	B, L	0.091		0.37	J	0.79		0.086		0.058	J
127-18-4	Tetrachloroethene	47	4,700	180	47		0.29		0.17	U	0.11	J	0.23	J	0.41		NA		0.88		0.093		NA	
79-01-6	Trichloroethene	3.0	300	8.8	3		NA		NA		NA		0.30	J	NA		0.096	J	NA		NA		0.038	J
95-63-6	1,2,4-Trimethylbenzene[1]	Not Available		31	Not Available		0.51	J	0.48	J	0.58	J	1.0		0.55		0.70	J	0.69		0.18		0.41	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available		0.82	U	0.83	U	0.70	U	0.24	J	0.16		0.20	J	0.098	U	0.054	J	0.13	J
108-38-3	o-Xylene[2]	Not Available		440	Not Available		0.56	J	0.35	J	0.55	J	1.1		0.41		0.58	J	2.5		0.17		0.42	J
NA	m&p-Xylene[2]	Not Available			Not Available		2.7		1.1		3.5		3.3		0.97		1.4		4.8		0.42		1.1	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440		3.3	J	1.5	J	4.1	J	4.4		1.4		2.0	J	7.4		0.59		1.5	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

[a] = The indoor and outdoor air analytical data from April 2010 were concluded to be biased high based on the re-sampling conducted at 115 River Road in 2010 (CH2M HILL, 2011b). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in April 2010. The data generated by Accutest were used to make relative comparisons of indoor and outdoor air concentrations during the 2010 sampling event (CH2M HILL, 2011a); however, due to the high bias, the 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations.

[b] = Q3-IA-03 location changed to medical office reception area

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Industrial Air

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

Appendix G-2(B) - 103 River Road Historical Air Data

Subslab Soil Gas Analytical Data - March 2009, April 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Cas #	Parameter Name	EPA Industrial SGSLs: 10^{-6} Target Risk (µg/m³)	EPA Industrial SGSLs: 10^{-4} Target Risk (µg/m³)	EPA Industrial SGSLs: HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential SGSL (µg/m³)	Q3-VI-01-031809		Q3-VI-01-040610		Q3-VI-01-030411		Q3-VI-01-040312		Q3-VI-01-121913		Q3-VI-01-031315		Q3-VI-01-121815	
					Location	Q3-VI-01													
					Location Description	Medical Office Storage Room													
					Sample Date	3/18/2009		4/6/2010		3/4/2011		4/3/2012		12/19/2013		3/13/2015		12/18/2015	
					Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
71-43-2	Benzene	52	5,200	4,400	79	1.0	J	0.064	U	5.6	U	0.81	U	0.64		0.42		0.39	
100-41-4	Ethylbenzene	160	16,000	150,000	250	1.3	J	0.087	U	5.6	U	0.41	J	0.76		0.63		3.8	J
91-20-3	Naphthalene	12	1,200	440	26	**120**		1.7		5.6	U	0.92		0.38	J	0.47		1.1	J
95-63-6	Tetrachloroethene	1,600	160,000	5,800	2,400	2.2	U	0.098	U	5.6	U	0.32	J	0.33	J	0.76		NA	
79-01-6	Trichloroethene	100	10,000	290	150	NA		NA		NA		NA		0.67	U	NA		0.043	J
108-67-8	1,2,4-Trimethylbenzene[1]	Not Available		1,000	Not Available	1.0	J	0.098	U	5.6	U	0.82		0.88		0.80		5.8	J
127-18-4	1,3,5-Trimethylbenzene[1]	Not Available		1,000	Not Available	2.2	U	0.68		5.6	U	0.29	J	0.26	J	0.22		1.5	J
NA	o-Xylene[2]	Not Available		15,000	Not Available	1.6	J	0.087	U	5.6	U	0.35	J	0.83		0.63		5.4	J
108-38-3	m&p-Xylene[2]	Not Available				3.4	J	0.087	U	11	U	1.5	J	2.6		2.0		14	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		15,000	22,000	5.0	J	0.087	U	11	U	1.9	J	3.4		2.6		19	J

Cas #	Parameter Name	Q3-VI-02-031809		Q3-VI-02-040610		Q3-VI-02-030411		Q3-VI-02-040312		Q3-VI-02-121913		Q3-VI-02-031315		Q3-VI-02-121815	
	Location	Q3-VI-02													
	Location Description	South stairwell													
	Sample Date	3/18/2009		4/6/2010		3/4/2011		4/3/2012		12/19/2013		3/13/2015		12/18/2015	
	Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
71-43-2	Benzene	0.77	J	0.38		6.6	U	0.71	U	0.82		0.44		0.39	
100-41-4	Ethylbenzene	1.9	J	0.087	U	6.6	U	0.27	J	0.70		0.31		1.4	
91-20-3	Naphthalene	**39**		0.10	U	6.6	U	0.71	U	0.62	U	0.22		0.77	J
95-63-6	Tetrachloroethene	2.6		0.098	U	6.6	U	0.28	J	0.36	J	0.4		NA	
79-01-6	Trichloroethene	NA		NA		NA		NA		0.24	J	NA		0.023	J
108-67-8	1,2,4-Trimethylbenzene[1]	0.86	J	0.098	U	6.6	U	0.49	J	0.40	J	0.41		3.6	
127-18-4	1,3,5-Trimethylbenzene[1]	2.1	U	1.6		6.6	U	0.71	U	0.62	U	0.12	J	0.85	
NA	o-Xylene[2]	1.8	J	0.087	U	3.2	U	0.28	J	0.70		0.38		2.0	
108-38-3	m&p-Xylene[2]	3.5	J	0.087	U	6.5	U	0.84	J	2.0		1.0		5.2	
1330-20-7	Xylenes (total) - sum of isomers	5.3	J	0.087	U	6.5	U	1.1	J	2.7		1.4		7.2	

Notes:

[shaded] Shaded indicates the value is greater than or equal to one or more of the SGSLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Industrial Air.

U = Below laboratory reporting limits

J = Data below calibration curve for that constituent, quantity estimated.

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix G-2(B) - 103 River Road Historical Air Data

Subslab Soil Gas Analytical Data - March 2009, April 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location						**Q3-VI-03**																									
Location Description						**Medical Office Utility Room**																									
Field Sample ID						**Q3-VI-03-031809**		**Q3-VI-03-040610**		**Q3-VI-03-030411**		**Q3-VI-03-040312**		**Q3-DUP1-040312**		**Q3-VI-03-032113**		**Q3-DUP1-032113**		**Q3-VI-03-121913**		**Q3-DUP1-121913**		**Q3-VI-03-031315**		**Q3-DUP1-031315**		**Q3-VI-03-121815**		**Q3-DUP1-121815**	
Sample Date						**3/18/2009**		**4/6/2010**		**3/4/2011**		**4/3/2012**				**3/21/2013**				**12/19/2013**				**3/13/2015**				**12/18/2015**			
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**				**µg/m³**				**µg/m³**				**µg/m³**				**µg/m³**			
		EPA Industrial SGSLs			**NJDEP Nonresidential SGSL (µg/m³)**																										
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																											
71-43-2	Benzene	52	5,200	4,400	79	0.98	J	0.1	U	3.2	U	0.76	U	0.76	U	0.15	J	0.12	J	0.49		0.39		0.54		0.58		0.47		0.55	
100-41-4	Ethylbenzene	160	16,000	150,000	250	1.7	J	0.087	U	3.2	U	0.76	U	0.76	U	0.90	U	0.69	U	0.50	J	0.59	J	0.23		0.28		0.69	J	0.75	
91-20-3	Naphthalene	12	1,200	440	26	92		0.94		3.2	U	0.76	U	0.76	U	0.90	U	0.69	U	0.69	U	0.42	J	0.16		0.19		0.44	J	0.73	J
95-63-6	Tetrachloroethene	1,600	160,000	5,800	2,400	2.7		0.098	U	3.2	U	0.25	J	0.76	U	0.18	U	0.14	J	0.39	J	0.87		0.1		0.13		NA		NA	
79-01-6	Trichloroethene	100	10,000	290	150	NA		NA		NA		NA		NA		NA		NA		0.26	J	0.25	J	NA		NA		0.037	J	0.044	J
108-67-8	1,2,4-Trimethylbenzene[1]	Not Available		1,000	Not Available	0.88	J	0.098	U	3.2	U	0.76	U	0.45	J	0.90	U	1.0		0.56	J	0.65	J	0.4		0.48		3.2		3.2	
127-18-4	1,3,5-Trimethylbenzene[1]	Not Available		1,000	Not Available	2.1	U	0.81		3.2	U	0.76	U	0.76	U	0.90	U	0.69	U	0.69	U	0.22	J	0.12		0.13		0.59	J	0.62	J
NA	o-Xylene[2]	Not Available		15,000	Not Available	1.7	J	0.087	U	3.2	U	0.76	U	0.23	J	0.90	U	0.69	U	0.56	J	0.81		0.3		0.36		0.99		1.0	
108-38-3	m&p-Xylene[2]	Not Available				3.3	J	0.087	U	6.4	U	0.65	J	0.88	J	0.75	J	0.75		1.8		2.4		0.71		0.82		2.6		2.8	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		15,000	22,000	5.0	J	0.087	U	6.4	U	0.65	J	1.1	J	0.75	J	0.75		2.4	J	3.2		1.0		1.2		3.6		3.8	

Notes:

Shaded indicates the value is greater than or equal to one or more of the SGSLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Industrial Air.

U = Below laboratory reporting limits

J = Data below calibration curve for that constituent, quantity estimated.

NA = Not analyzed

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

Appendix G-2(C) - 103 River Road Historical Air Data

Outdoor Air Analytical Data - March 2009, April 2010, March 2011, April 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location		Q3-OA-01														Q3-OA-02											
Location Description		North side of the 103 RR Building - Chained to Fence														Southwest of the 103 RR Building - chained to parking lot light[b]											
Field Sample ID		Q3-OA-01-031809		Q3-OA-01-040610[a]		Q3-OA-01-030511		Q3-OA-01-040312		Q3-OA-01-032113		Q3-OA-01-121913		Q3-OA-01-031315		Q3-OA-01-121815		Q3-OA-01-030411		Q3-OA-02-040312		Q3-OA-02-032113		Q3-OA-02-121913		Q3-OA-02-031315		Q3-OA-02-121815	
Sample Date		3/18/2009		4/6/2010		3/5/2011		4/3/2012		3/21/2013		12/19/2013		3/13/2015		12/18/2015		3/4/2011		4/3/2012		3/21/2013		12/19/2013		3/13/2015		12/18/2015	
Units		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3	
Cas #	Parameter Name																												
71-43-2	Benzene	1.3		2.4		0.66		0.49		0.52		1.0		0.6		0.86		0.72		0.51		0.59		1.1		0.54		1.2	
100-41-4	Ethylbenzene	0.52	J	1.6		0.67	U	0.78	U	0.71	U	0.35	J	0.12	J	0.35	J	0.17	J	0.72	U	0.74	U	0.37	J	0.11	J	0.35	J
91-20-3	Naphthalene	0.35		4.6		0.096		0.040		0.055		0.12	B, L	0.032		0.13	J	0.015	J	0.052		0.051		0.045	L, U	0.062		0.33	J
127-18-4	Tetrachloroethene	0.59		0.81		0.16		0.78	U	0.71	U	0.21	J	0.61		NA		0.69	U	0.72	U	0.74	U	0.22	J	0.056		NA	
79-01-6	Trichloroethene	NA		NA		NA		NA		NA		0.67	U	NA		0.042	J	NA		NA		NA		0.90	U	NA		0.044	J
95-63-6	1,2,4-Trimethylbenzene	0.59	J	1.1		0.67	U	0.16	U	0.14	U	0.45	J	0.13		0.40	J	0.15		0.14	U	0.15	U	0.90	U	0.14		0.57	J
108-67-8	1,3,5-Trimethylbenzene	0.21	J	0.098	U	0.67	U	0.24	J	0.71	U	0.67	U	0.034	J	0.11	J	0.69	U	0.72	U	0.74	U	0.90	U	0.04	J	0.17	J
108-38-3	o-Xylene	0.6	J	2.3		0.67	U	0.78	U	0.71	U	0.51	J	0.13		0.41	J	0.69	U	0.72	U	0.74	U	0.45	J	0.14		0.45	J
NA	m&p-Xylene	1.6		5.6		0.39	J	0.54	J	0.42	J	1.1		0.32		1.1		0.48	J	0.49	J	0.45	J	1.0		0.4		1.2	
1330-20-7	Xylenes (total) - sum of isomers	2.2	J	7.8		0.39	J	0.54	J	0.42	J	1.6	J	0.5		1.5	J	0.48	J	0.49	J	0.45	J	1.5	J	0.5		1.7	J

Notes:

[a] = The indoor and outdoor air analytical data from April 2010 were concluded to be biased high based on the re-sampling conducted at 115 River Road in 2010 (CH2M HILL, 2011b). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in April 2010. The data generated by Accutest were used to make relative comparisons of indoor and outdoor air concentrations during the 2010 sampling event (CH2M HILL, 2011a); however, due to the high bias, the 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations.

[b] = Q3-OA-02 was first sampled in March 2011. The original location was chained to a bench. In 2012, the bench was no longer there and the sample was chained to the parking lot light.

U = Below laboratory reporting limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

NA = Not analyzed

Appendix G-3(A-1) - 115 River Road Historical Air Data

Buildings 2 and 3 Indoor Air Analytical Data - March 2006, July 2006, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Building	Building 2													
					Location	**Q1-IA-32**												**Q1-IA-33**	
					Location Description	**Bldg 2 1st Floor Main Open Space**												**Bldg 2 West Office on Desk**	
					Field Sample ID	**Q1-IA-32-033111**		**Q1-IA-32-032312**		**Q1-IA-32-032013**		**Q1-IA-32-121913**		**Q1-IA-32-031215**		**Q1-IA-32-121715**		**Q1-IA-33-033111**	
					Sample Date	**3/31/2011**		**3/23/2012**		**3/20/2013**		**12/19/2013**		**3/12/2015**		**12/17/2015**		**3/31/2011**	
					Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m3**		**µg/m3**		**µg/m³**	
		EPA Commercial IASLs																	
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**														
71-43-2	Benzene	1.6	160	130	2	0.83		1.3		0.69		1.1		2.2		1.1		0.82	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.52	J	1.2		0.37	J	0.65	J	1.3		0.81		0.52	J
91-20-3	Naphthalene	0.36	36	13	3	4.3		1.6		1.4		2.9	L	4.8		1.1		3.6	
79-01-6	Trichloroethene	3.0	300	8.8	3	NA		NA		NA		NA		NA		0.057	J	NA	
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.39	J	4.9		0.32	J	0.69	J	0.84		0.98		0.45	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.73	U	1.5		0.71	U	0.85	U	0.27		0.28	J	0.71	U
108-38-3	o-Xylene	Not Available		440	Not Available	0.37	J	1.0		0.29	J	0.69	J	0.88		0.97		0.37	J
NA	m&p-Xylene[2]	Not Available				0.86		2.6		0.72		1.5		1.9		2.6		0.92	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	1.2	J	3.6		1.0	J	2.2	J	2.8		3.6		1.3	J

	Building	Building 3											
	Location	**Q1-IA-13**											
	Location Description	**Bldg 3 2nd Floor, Desk Area**											
	Field Sample ID	**Q1-IA-13-031906**		**Q1-IA-13-073006**		**Q1-IA-13-122013**		**Q1-IA-13-032615**		**Q1-IA-13-121715**		**Q1-DUP3-121715**	
	Sample Date	**3/19/2006**		**7/30/2006**		**12/20/2013**		**3/26/2015**		**12/17/2015**			
Cas #	**Parameter Name**	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**			
71-43-2	Benzene	0.66		0.59		2.6		4.7		2.0		2.0	
100-41-4	Ethylbenzene	3.8		3.6		2.4		4.4		1.8		1.7	
91-20-3	Naphthalene	0.71		1.5		1.6	L	2.2		1.2		1.2	
79-01-6	Trichloroethene	0.72		1.5		NA		NA		0.084	J	0.061	J
95-63-6	1,2,4-Trimethylbenzene	0.63		1.4		1.4		4.7		1.8		2.0	
108-67-8	1,3,5-Trimethylbenzene[1]	0.17		0.43		0.44	J	1.8		0.51	J	0.57	J
108-38-3	o-Xylene	2.7		2.6		2.1		4.8		2.0		2.0	
NA	m&p-Xylene[2]	13		12		6.9		15		5.9		5.8	
1330-20-7	Xylenes (total) - sum of isomers	16		15		9.0		20		7.9		7.8	

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

NA = Not analyzed

Appendix G-3(A-1) - 115 River Road Historical Air Data
Buildings 2 and 3 Indoor Air Analytical Data - March 2006, July 2006, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015
Quanta Site, Edgewater, New Jersey

					Building	**Building 3**										**Building 3**													
					Location	**Q1-IA-14**										**Q1-IA-29**				**Q1-IA-30**								**Q1-IA-31**	
					Location Description	**Bldg 3 - 1st floor, Lawyers office library**								**Lawyer's Office - Open Space**		**Bldg 3 - 1st Floor Hallway - West Side**		**Bldg 3 - Room 304 (West Side)**		**Bldg 3 - 1st Floor Hallway Center**		**Room 302 (Center)**				**1st Floor, Center of Bldg, South Office**		**Bldg 3 - 1st Floor Hallway - East Side (outside of lawyer's office)**	
					Field Sample ID	**Q1-IA-14-031906**		**Q1-IA-20-031906 (duplicate of #14)**		**Q1-IA-14-073006**		**Q1-IA-20-073006**		**Q1-IA-14-033111**		**Q1-IA-29-052210**		**Q1-IA-29-033111**		**Q1-IA-30-052210**		**Q1-IA-30-033111**		**Q1-IA-30-032312**		**Q1-IA-30-032013**		**Q1-IA-31-052210**	
					Sample Date	**3/19/2006**				**7/30/2006**		**7/30/2006**		**3/31/2011**		**5/22/2010**		**3/31/2011**		**5/22/2010**		**3/31/2011**		**3/23/2012**		**3/20/2013**		**5/22/2010**	
					Units	**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**		**μg/m³**	
		EPA Commercial IASLs																											
Cas #	**Parameter Name**	**10^{-6} Target Risk (μg/m³)**	**10^{-4} Target Risk (μg/m³)**	**HQ=1 Target Risk (μg/m³)**	**NJDEP Nonresidential IASL (μg/m³)**																								
71-43-2	Benzene	1.6	160	130	2	0.61		0.62		0.63		0.69		0.85		0.62		0.66		0.78		0.76		1.1		0.68		0.78	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.37		0.40		1.2		1.3		0.96		0.67	J	0.46	J	0.92		0.99		1.1		0.33	J	1.2	
91-20-3	Naphthalene	0.36	36	13	3	1.0		0.88		3.1		2.8		2.8		1.0		3.1		1.1		3.0		1.6		1.7		1.0	
79-01-6	Trichloroethene	3.0	300	8.8	3	0.067	U	0.065	U	0.40		0.43		NA		0.094	U	NA		0.086	U	NA		NA		NA		0.098	U
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.32		0.37		1.0		1.0		0.86		0.53	J	0.35	J	0.80		0.41	J	2.2		0.32	J	0.85	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.11	J	0.12	J	0.31		0.30		0.28	J	0.76	U	0.65	U	0.29	J	0.77	U	0.79	J	0.77	U	0.79	U
108-38-3	o-Xylene	Not Available		440	Not Available	0.37		0.42		0.97		1.0		0.67	J	0.58	J	0.38	J	0.87		1.1		0.93		0.28	J	1.0	
NA	m&p-Xylene[2]	Not Available				1.1		1.3		3.7		3.9		2.5		1.9		0.93		2.8		2.4		2.9		0.67	J	3.4	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	1.5		1.7		4.7		4.9		3.2	J	2.5		1.3	J	3.7		3.5		3.8		0.95	J	4.4	

Notes:
Shaded indicates the value is greater than or equal to one or more of the IASLs
NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013
The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air
D= The reported result is from a dilution.
U = Below the laboratory method detection limits
J = Data below calibration curve for that constituent, quantity estimated
L = Laboratory control sample recovery outside the client specified limits; results may be biased low
[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene anc 1,3,5-trimethylbenzene.
[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes
NA = Not analyzed

Appendix G-3(A-2) - 115 River Road Historical Air Data

Buildings 4 and 6 Indoor Air Analytical Data - March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013/January 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Building	Building 4										Building 6									
						Location	Q1-IA-35										Q1-IA-28									
						Location Description	Bldg 4 1st Floor Conference Room (East Side)										Bldg 6 Half-Basement				Bldg 6 First Floor Storage Room					
						Field Sample ID	Q1-IA-35-033111	Q1-IA-35-032312	Q1-IA-35-032013	Q1-IA-35-121913	Q1-IA-35-031215	Q1-IA-35-121715	Q1-IA-28-032308	Q1-IA-28-032209	Q1-IA-28-032010[a]	Q1-IA-28-052210	Q1-IA-28-033111	Q1-IA-28-032312	Q1-IA-28-032113	Q1-IA-28-011414	QI-IA-28-031915	Q1-IA-28-121715
						Sample Date	3/31/2011	3/23/2012	3/20/2013	12/19/2013	3/12/2015	12/17/2015	3/23/2008	3/22/2009	3/20/2010[a]	5/22/2010	3/31/2011	3/23/2012	3/21/2013	1/14/2014	3/19/2015	12/17/2015
						Units	µg/m³	µg/m³	µg/m³	µg/m³	µg/m3	µg/m3	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³
Cas #	Parameter Name	EPA Commercial IASLs 10^{-6} Target Risk (µg/m³)	EPA Commercial IASLs 10^{-4} Target Risk (µg/m³)	EPA Commercial IASLs HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)																					
71-43-2	Benzene	1.6	160	130	2	0.65	1.1	0.76	1.4	3.2	2.2	7.0	0.99	2.4	1.8	0.62	1.0	3.9	0.85	4.3	1.0
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.38	1.1	0.52 J	0.81	2.5	0.85	4.7	0.43 J	1.3	1.8	0.40 J	1.3	3.5	0.61 J	2.7	0.68 J
91-20-3	Naphthalene	0.36	36	13	3	3.0	2.1	2.4	2.1 B, L	1.5	1.2	1.6	0.30 U	1.9	1.0	1.9	1.4	2.1	1.3	0.6	0.26
79-01-6	Trichloroethene	3.0	300	8.8	3	NA	NA	NA	NA	NA	0.066 J	0.70 U	0.14 U	0.81	0.25	NA	NA	NA	NA	NA	0.095 J
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.36	2.5	0.37 J	1.1	2.6	1.2	1.3	0.31 J	1.3	0.71	0.30 J	3.4	1.3	1.3	2.3	0.64 J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.73	0.86	0.79 U	0.3 J	0.74	0.32 J	0.65 J	0.12 J	0.74	0.70 U	0.63 U	1.2	0.49 J	0.37 J	0.78	0.19 J
108-38-3	o-Xylene	Not Available		440	Not Available	0.31	0.94	0.43 J	0.97	2.7	1.0	3.4	0.59 J	1.1	1.4	0.27 J	1.1	2.0	0.64 J	2.5	0.76
NA	m&p-Xylene[2]	Not Available			Not Available	0.85	2.8	1.1	2.4	6.7	2.7	6.9	2.1	4.8	4.9	0.70	3.4	4.0	1.7	6.2	2.2
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	1.2	3.7	1.5 J	3.4	9.4	3.7	10.3	2.7 J	6.1	6.3	0.97 J	4.5	6.0	2.3 J	8.7	3.0

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

NA = Not analyzed

Appendix G-3(A-3) - 115 River Road Historical Air Data

Building 7 Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Location	Q1-IA-08				Q1-IA-09				Q1-IA-10				Q1-IA-11			
					Location Description	Bldg 7 Kitchen Room at Entrance				Bldg 7 Pre-school Room				Bldg 7 Kitchen				Bldg 7 Former Daycare Toddler Room			
					Field Sample ID	Q1-IA-08-031906		Q1-IA-08-073006		Q1-IA-09-031906		Q1-IA-09-073006		Q1-IA-10-031906		Q1-IA-10-073006		Q1-IA-11-031906		Q1-IA-11-073006	
					Sample Date	3/19/2006		7/30/2006		3/19/2006		7/30/2006		3/19/2006		7/30/2006		3/19/2006		7/30/2006	
					Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
		EPA Commercial IASLs																			
Cas #	Parameter Name	10^{-6} Target Risk (µg/m³)	10^{-4} Target Risk (µg/m³)	HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)																
71-43-2	Benzene	1.6	160	130	2	0.73		0.76		0.68		0.75		0.64		0.69		0.78		0.72	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.31		0.64		0.26		0.7		0.21		0.56		0.28		0.58	
91-20-3	Naphthalene	0.36	36	13	3	0.33		0.94		0.33		0.9		0.27		0.77		0.25		0.86	
79-01-6	Trichloroethene	3.0	300	8.8	3	0.025		0.12	U	0.023	U	0.11	U	0.015	U	0.085	U	0.013	U	0.11	U
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.26		0.65		0.30		0.71		0.24		0.57		0.27		0.58	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.099	J	0.22		0.10	J	0.24		0.078	J	0.18		0.088	J	0.19	
108-38-3	o-Xylene	Not Available		440	Not Available	0.32		0.71		0.31		0.81		0.26		0.65		0.32		0.64	
NA	m&p-Xylene[2]	Not Available				0.84		1.8		0.79		2.0		0.69		1.6		0.80		1.6	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	1.2		2.5		1.1		2.8		0.95		2.3		1.1		2.2	

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

UJ = Below the laboratory method detection limits, quantity estimated

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends ir indoor and outdoor air concentrations due to the high bias.

[c] = The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

Appendix G-3(A-3) - 115 River Road Historical Air Data

Building 7 Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Location	Q1-IA-12																					
					Location Description	Bldg 7 Former Daycare Toddler Room																					
					Field Sample ID	Q1-IA-12-031906		Q1-IA-19-031906		Q1-IA-12-073006		Q1-IA-19-073006		Q1-IA-12-032308[a]		Q1-DUP1-032308[a]		Q1-IA-12-042708		Q1-DUP-042708		Q1-IA-12-032209		Q1-DUP2-032209		Q1-IA-12-032010[b]		Q1-DUP2-032010[b]	
					Sample Date	3/19/2006				7/30/2006		7/30/2006		3/23/2008[a]				4/27/2008				3/22/2009				3/20/2010[b]			
					Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
Cas #	Parameter Name	EPA Commercial IASLs			NJDEP Nonresidential IASL (µg/m³)																								
		10^{-6} Target Risk (µg/m³)	10^{-4} Target Risk (µg/m³)	HQ=1 Target Risk (µg/m³)																									
71-43-2	Benzene	1.6	160	130	2	0.75		0.71		0.75		0.74		3.1		3.0		0.56		0.56	U	0.98		0.98		2.9		2.3	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.32		0.31		0.65		0.86		1.7		1.7		0.25	J	0.24	J	0.44	J	0.41	J	1.3		0.96	
91-20-3	Naphthalene	0.36	36	13	3	0.34		0.47		0.93		0.82		0.61		0.41		0.59		0.38		0.58	U	0.27	U	2.0		2.6	
79-01-6	Trichloroethene	3.0	300	8.8	3	0.029		0.024		0.12	U	0.11	U	0.89	U	0.90	U	0.61	U	1.0	U	0.31	U	0.14	UJ	1.9		1.6	
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.36		0.32		0.69		0.76		0.64	J	0.60	J	0.28	J	0.26	J	0.33	J	0.30	J	1.8		1.3	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.11	J	0.10	J	0.23		0.26		0.29	J	0.24	J	0.61	U	1.0	U	0.14	J	0.13	J	0.98		0.79	
108-38-3	o-Xylene	Not Available		440	Not Available	0.37		0.43		0.74	J	1.3	J	1.3		1.2		0.28	J	0.26	J	0.43	J	0.40	J	1.3		1.0	
NA	m&p-Xylene[2]	Not Available				0.95		0.81		1.8	J	3.1	J	2.7		2.5		0.75		0.74	J	1.1		1.1		4.3		3.3	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	1.3		1.2		2.5		4.4	J	4.0		3.7		1.0	J	1.0	J	1.5	J	1.5	J	5.6		4.3	

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

UJ = Below the laboratory method detection limits, quantity estimated

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends ir indoor and outdoor air concentrations due to the high bias.

[c] = The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

Appendix G-3(A-3) - 115 River Road Historical Air Data

Building 7 Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Location	**Q1-IA-12 (con't)**				**Q1-IA-26**												**Q1-IA-27**									
						Location Description	**Bldg 7 Former Daycare Toddler Room**				**Building 7 Kitchen, Next to Bathroom**												**Bldg 7 2nd Floor North Room**									
						Field Sample ID	**Q1-IA-12-052210**		**Q1-DUP2-052210**		**Q1-IA-26-032308[a]**		**Q1-IA-26-042708**		**Q1-IA-26-032209**		**Q1-IA-26-032010[b]**		**Q1-IA-26-052210**		**Q1-IA-27-032308[a]**		**Q1-IA-27-032209**		**Q1-IA-27-032010[b]**		**Q1-IA-27-052210**			
						Sample Date	**5/22/2010**				**3/23/2008[a]**		**4/27/2008**		**3/22/2009**		**3/20/2010[b]**		**5/22/2010**		**3/23/2008[a]**		**3/22/2009**		**3/20/2010[b]**		**5/22/2010**			
						Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**			
Cas #	**Parameter Name**	**EPA Commercial IASLs**			**NJDEP Nonresidential IASL (µg/m³)**																											
		10^{-6} Target Risk (µg/m³)	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																												
71-43-2	Benzene	1.6	160	130	2	0.95		1.3		1.5		0.62	U	1.1		2.2		1.2		1.7		1.0		2.1		1.1			
100-41-4	Ethylbenzene	4.9	490	4,400	5	1.1		1.4		0.76		0.25	J	0.48	J	0.91		1.6		0.88		0.43	J	0.87		1.4			
91-20-3	Naphthalene	0.36	36	13	3	1.0		1.2		0.20		0.50		0.64	U	2.5		0.96		0.27		0.47	U	2.9		1.4			
79-01-6	Trichloroethene	3.0	300	8.8	3	0.21		0.23		0.72	U	0.88	U	0.15	U	2.2		0.17		0.77	U	0.15	U	1.9		0.24			
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.90		1.1		0.32	J	0.30	J	0.44	J	1.3		0.83		0.37	J	0.34	J	1.3		0.77	J		
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.31	J	0.39	J	0.72	U	0.88	U	0.19	J	0.79		0.30	J	0.77	U	0.14	J	0.79		0.89	U		
108-38-3	o-Xylene	Not Available		440	Not Available	1.1		1.4		0.61	J	0.31	J	0.47	J	0.96		1.2		0.70	J	0.43	J	0.96		1.2			
NA	m&p-Xylene[2]	Not Available				2.8		3.5		1.3	J	0.78	J	1.2		3.1		3.1		1.5	J	1.1		3.2		3.2			
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	3.9		4.9		1.9	J	1.1	J	1.7	J	4.0		4.3		2.2	J	1.5	J	4.1		4.4			

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

UJ = Below the laboratory method detection limits, quantity estimated

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends ir indoor and outdoor air concentrations due to the high bias.

[c] = The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

Appendix G-3(A-3) - 115 River Road Historical Air Data

Building 7 Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Location	**Q1-IA-36**																	
					Location Description	**Bldg 7 1st Floor Far East Room**																	
					Field Sample ID	**Q1-IA-36-033111**		**Q1-DUP2-033111**		**Q1-IA-36-032312**		**Q1-DUP1-032312**		**Q1-IA-36-032013**		**Q1-DUP1-032013**		**Q1-IA-36-121913**		**Q1-DUP1-031915[c]**		**Q1-IA-36-121715**	
					Sample Date	**3/31/2011**				**3/23/2012**				**3/20/2013**				**12/19/2013**		**3/19/2015**		**12/17/2015**	
					Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
		EPA Commercial IASLs																					
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																		
71-43-2	Benzene	1.6	160	130	2	0.69		0.66		1.0		1.1		4.6		4.3		1.9		1.1		0.93	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.70	J	0.67	J	0.88		0.92		3.1		2.9		1.7		0.6		0.47	J
91-20-3	Naphthalene	0.36	36	13	3	0.85		0.92		0.59		0.54		0.78	J	0.43	J	1.9	L	1.5		0.65	
79-01-6	Trichloroethene	3.0	300	8.8	3	NA		NA		NA		NA		NA		NA		NA		NA		0.057	J
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.67	J	0.66	J	3.6		3.7		3.1		2.5		1.4		1.0		0.65	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.77	U	0.22	J	1.2		1.2		0.85		0.78		0.45	J	0.33		0.21	J
108-38-3	o-Xylene	Not Available		440	Not Available	0.57	J	0.51	J	0.89		0.91		3.3		3.0		1.4		0.8		0.57	J
NA	m&p-Xylene[2]	Not Available				2.4		2.4		2.5		2.6		9.9		9.1		3.2		2.0		1.5	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	3.0	J	2.9	J	3.4		3.5		13		12		4.6		2.8		2.1	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

UJ = Below the laboratory method detection limits, quantity estimated

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends ir indoor and outdoor air concentrations due to the high bias.

[c] = The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

Appendix G-3(A-3) - 115 River Road Historical Air Data

Building 7 Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Location	Q1-IA-37												Q1-IA-38					
					Location Description	Bldg 7 1st Floor West Room Next to Stairs												Bldg 7 2nd Floor Main Room					
					Field Sample ID	Q1-IA-37-033111		Q1-IA-37-032312		Q1-IA-37-032013		Q1-IA-37-121913		QI-IA-37-031915		Q1-IA-37-121615		Q1-IA-38-033111		Q1-IA-38-032312		Q1-IA-38-032013	
					Sample Date	3/31/2011		3/23/2012		3/20/2013		12/19/2013		3/19/2015		12/16/2015		3/31/2011		3/23/2012		3/20/2013	
					Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
		EPA Commercial IASLs																					
Cas #	Parameter Name	10^{-6} Target Risk (µg/m³)	10^{-4} Target Risk (µg/m³)	HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)																		
71-43-2	Benzene	1.6	160	130	2	0.65		1.0		3.1		1.8		0.73		0.57		0.56		0.94		2.9	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.68	J	0.99		1.9		1.9		0.63		0.25	J	0.60	J	0.86		1.7	
91-20-3	Naphthalene	0.36	36	13	3	0.90		0.78		0.45		2.6	L	0.31		0.31		0.78		0.43		0.53	
79-01-6	Trichloroethene	3.0	300	8.8	3	NA		NA		NA		NA		NA		0.028	J	NA		NA		NA	
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.50	J	2.7		1.8		1.5		27		0.39	J	0.46	J	6.10		1.5	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.71	U	0.87		0.50	J	0.44	J	8.1		0.12	J	0.74	U	1.80		0.47	J
108-38-3	o-Xylene	Not Available		440	Not Available	0.51	J	0.97		2.0		1.5		1.0		0.33	J	0.44	J	0.93		1.8	
NA	m&p-Xylene[2]	Not Available				2.4		2.9		5.7		3.0		2.4		0.80		2.1		2.40		5.0	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	2.9	J	3.9		7.7		4.5		3.4		1.1	J	2.5	J	3.3		6.8	

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

UJ = Below the laboratory method detection limits, quantity estimated

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends ir indoor and outdoor air concentrations due to the high bias.

[c] = The parent sample collected at this location in March 2015 was not analyzed because the canister leaked during shipment.

Appendix G-3(A-4) - 115 River Road Historical Air Data

Building 7/8 Basement Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, April 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location						**Q1-IA-21**																	
Location Description						**Bldg 7/8 Basement Hallway Near Sump 2**																	
Field Sample ID						**Q1-IA-21-073006**		**Q1-IA-21-032308[a]**		**Q1-IA-21-042708**		**Q1-IA-21-032209**		**Q1-IA-21-032010[b]**		**Q1-IA-21-052210**		**Q1-IA-21-033111**		**Q1-DUP4-033111**	
Sample Date						**7/30/2006**		**3/23/2008[a]**		**4/27/2008**		**3/22/2009**		**3/20/2010[b]**		**5/22/2010**		**3/31/2011**			
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
		EPA Commercial IASLs																			
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																
71-43-2	Benzene	1.6	160	130	2	1.8		20		12		4.2		7.0		3.0		1.2		1.1	
100-41-4	Ethylbenzene	4.9	490	4,400	5	1.6		16		7.1		3.8		4.8		2.1		0.83		0.83	J
91-20-3	Naphthalene	0.36	36	13	3	4.6		11		10		3.2		7.9		4.2		2.1		0.44	
79-01-6	Trichloroethene	3.0	300	8.8	3	0.42		0.78	U	0.60	U	0.28		1.8		0.092	U	NA		NA	
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	1.3		5.1		3.0		1.6		3.2		1.4		0.54	J	0.45	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.53		2.5		1.4		0.88		1.4		0.50	J	0.24	J	1.1	U
108-38-3	o-Xylene	Not Available		440	Not Available	1.5		12		6.6		3.0		3.7		1.9		0.59	J	0.58	J
NA	m&p-Xylene[2]	Not Available				3.8		22		9.9		5.2		11		4.4		1.5		1.7	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	5.3		34		17		8.2		15		6.3		2.1	J	2.3	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

D = The reported result is from a dilution.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(A-4) - 115 River Road Historical Air Data

Building 7/8 Basement Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, April 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location						**Q1-IA-21 (con't)**																	
Location Description						**Bldg 7/8 Basement Hallway Near Sump 2**																	
Field Sample ID						**Q1-IA-21-032312**		**Q1-IA-21-032013**		**Q1-DUP2-032013**		**Q1-IA-21-121913**		**Q1-DUP2-121913**		**Q1-IA-21-052015**		**Q1-DUP2-052015**		**Q1-IA-21-121615**	
Sample Date						**3/23/2012**		**3/20/2013**				**12/19/2013**				**5/20/2015**				**12/16/2015**	
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
		EPA Commercial IASLs																					
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																		
71-43-2	Benzene	1.6	160	130	2	1.4		4.1		4.2		3.8		3.9		1.6		1.9		1.4	
100-41-4	Ethylbenzene	4.9	490	4,400	5	1.8		4.3		4.3		4.2		4.4		2.1		2.3		0.79	
91-20-3	Naphthalene	0.36	36	13	3	2.3		5.2		5.2		9.9	L	10	L	9.5	J	14	J	0.66	
79-01-6	Trichloroethene	3.0	300	8.8	3	NA		NA		NA		NA		NA		NA		NA		0.022	J
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	2.6		1.7		1.7		2.1		2.2		1.2	J	1.7	J	0.53	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.91		0.84		0.85		0.76		0.77		0.36		0.49		0.17	J
108-38-3	o-Xylene	Not Available		440	Not Available	1.4		2.6		2.6		2.5		2.6		1.3		1.7		0.54	J
NA	m&p-Xylene[2]	Not Available				3.1		5.2		5.2		4.5		4.7		2.6		3.5		1.0	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	4.5		7.8		7.8		7.0		7.3		3.9		5.2		1.5	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

D = The reported result is from a dilution.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(A-4) - 115 River Road Historical Air Data

Building 7/8 Basement Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, April 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location						**Q1-IA-23**																													
Location Description						**Bldg 7/8 Basement far East Room - Next to Floor Drain**																													
Field Sample ID						**Q1-IA-23-032308[a]**		**Q1-DUP2-032308**		**Q1-IA-23-042708**		**Q1-IA-23-032209**		**Q1-IA-23-03210[b]**		**Q1-IA-23-052510**		**Q1-DUP4-052510**		**Q1-IA-23-033111**		**Q1-IA-23-032312**		**Q1-IA-23-032013**		**Q1-IA-23-121913**		**Q1-IA-23-052015**		**Q1-IA-23-121615**			
Sample Date						**3/23/2008[a]**				**4/27/2008**		**3/22/2009**		**3/20/2010[b]**		**5/25/2010**		**5/25/2010**		**3/31/2011**		**3/23/2012**		**3/20/2013**		**12/19/2013**		**5/20/2015**		**12/16/2015**			
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**			
Cas #	**Parameter Name**	**EPA Commercial IASLs**			**NJDEP Nonresidential IASL (µg/m³)**																														
		10^{-6} Target Risk (µg/m³)	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																														
71-43-2	Benzene	1.6	160	130	2	19		18		8.7		4.3		4.2		2.1		2.1		0.95		1.0		3.0		2.1		1.4		0.79			
100-41-4	Ethylbenzene	4.9	490	4,400	5	15		14		5.3		3.6		0.83		1.6		1.5		0.67	J	1.9		3.0		1.8		1.4		0.72			
91-20-3	Naphthalene	0.36	36	13	3	6.6	J	9.7	J	3.6		2.5		0.10	U	2.3		2.2		1.3		0.68		2.6		3.0	L	2.1		0.37			
79-01-6	Trichloroethene	3.0	300	8.8	3	0.75	U	0.61	U	0.60	U	0.098	U	1.3		0.15	U	0.18		NA		NA		NA		NA		NA		1.4			
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	4.1		4.2		1.8		1.5		0.10	U	1.2		0.98		0.43	J	5.3		1.3		1.0		1.5		0.73			
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	1.9		2.0		0.83		0.75		0.54		0.41	J	0.35	J	0.68	U	2.2		0.53	J	0.40	J	0.43		0.21		J	
108-38-3	o-Xylene	Not Available		440	Not Available	10		10		4.4		2.9		0.087	U	1.4		1.2		0.48	J	1.5		1.8		1.2		1.6		0.82			
NA	m&p-Xylene[2]	Not Available				21		20		8.3		5.5		1.2		3.9		3.4		1.6		5.1		3.6		2.4		4.7		2.3			
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	31		30		13		8.4		1.2		5.3		4.6		2.1	J	6.6		5.4		3.6		6.3		3.1			

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

D = The reported result is from a dilution.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(A-4) - 115 River Road Historical Air Data

Building 7/8 Basement Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, April 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Location	**Q1-IA-24**																										
						Location Description	**Bldg 7/8 Basement far West Room - Next to Elevator**																										
						Field Sample ID	**Q1-IA-24-032308[a]**		**Q1-IA-24-032209**		**Q1-IA-24-032010[b]**		**Q1-IA-24-052210**		**Q1-IA-24-033111**		**Q1-IA-24-040814**		**Q1-IA-24-052015**		**Q1-DUP4-052015**		**Q1-IA-24-121615**		**Q1-DUP1-121615**							
						Sample Date	**3/23/2008[a]**		**3/22/2009**		**3/20/2010[b]**		**5/22/2010**		**3/31/2011**		**4/8/2014**		**5/20/2015**				**12/16/2015**									
						Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**				**µg/m³**									
		EPA Commercial IASLs			**NJDEP Nonresidential IASL (µg/m³)**																												
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																												
71-43-2	Benzene	1.6	160	130	2		9.1		0.96		2.8		1.9		0.96		3.5		3.3		3.1		2.3		2.6							
100-41-4	Ethylbenzene	4.9	490	4,400	5		7.1		0.41	J	1.3		1.6		0.78		2.8		5.3		4.8		2.3		2.3							
91-20-3	Naphthalene	0.36	36	13	3		3.5		0.45	U	2.2		1.3		1.3		2.9	L	22	D	20	D	4.0		3.2							
79-01-6	Trichloroethene	3.0	300	8.8	3		0.69	U	0.077	U	0.70		0.11	U	NA		NA		NA		NA		0.036	J	0.034	J						
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available		2.3		0.32	J	1.3		1.1		0.50	J	1.1	J	5.7	J	2.5	J	1.3		1.2							
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available		1.1		0.13	J	0.79		0.45	J	0.22	J	0.41	J	1.4	J	0.84	J	0.41	J	0.38	J						
108-38-3	o-Xylene	Not Available		440	Not Available		5.2		0.40	J	1.0		1.4		0.59	J	1.8		3.9	J	2.7	J	1.3		1.3							
NA	m&p-Xylene[2]	Not Available					9.7		0.98		3.3		3.5		1.0		3.9		8.1	J	5.1	J	1.9		1.9							
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440		15		1.4	J	4.3		4.9		1.6	J	5.7		12		7.8		3.2		3.2							

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

D = The reported result is from a dilution.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(A-4) - 115 River Road Historical Air Data

Building 7/8 Basement Indoor Air Analytical Data - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, April 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Location	**Q1-IA-25**																										
						Location Description	**Bldg 7/8 Basement next to Sump 1**																										
						Field Sample ID	**Q1-IA-25-032308[a]**		**Q1-IA-25-032209**		**Q1-IA-25-032010[b]**		**Q1-IA-25-052210**		**Q1-IA-25-033111**		**Q1-IA-25-032312**		**Q1-IA-25-032013**		**Q1-IA-25-121913**		**Q1-IA-25-052015**		**Q1-IA-25-121615**							
						Sample Date	**3/23/2008[a]**		**3/22/2009**		**3/20/2010[b]**		**5/22/2010**		**3/31/2011**		**3/23/2012**		**3/20/2013**		**12/19/2013**		**5/20/2015**		**12/16/2015**							
						Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**							
		EPA Commercial IASLs																														
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**		**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																											
71-43-2	Benzene	1.6		160	130	2	10		1.4		3.8		1.3		0.98		2.7		4.4		7.5		2.3		1.2							
100-41-4	Ethylbenzene	4.9		490	4,400	5	8.4		0.64	J	2.0		0.97		0.70	J	4.9		4.9		7.9		3.5		1.0							
91-20-3	Naphthalene	0.36		36	13	3	6.3		1.4		4.5		1.7		1.1		2.0		9.3		28	L	18	D	1.1							
79-01-6	Trichloroethene	3.0		300	8.8	3	0.72	U	0.12	U	3.4		0.098	U	NA		NA		NA		NA		NA		0.037	J						
95-63-6	1,2,4-Trimethylbenzene	Not Available			31	Not Available	2.7		0.44	J	2.1		0.75	J	0.48	J	17		2.2		3.8		1.8		0.70	J						
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available			31	Not Available	1.3		0.18	J	0.98		0.79	U	0.73	U	6.1		1.0		1.1		0.6		0.23	J						
108-38-3	o-Xylene	Not Available			440	Not Available	6.2		0.62	J	1.9		0.81		0.51	J	4.4		3.6		4.0		2.0		0.69	J						
NA	m&p-Xylene[2]	Not Available					12		1.4		6.5		2.0		1.0		12		6.6		6.1		3.8		1.2							
1330-20-7	Xylenes (total) - sum of isomers	Not Available			440	440	18		2.0	J	8.3		2.8		1.5	J	16		10		10		5.8		1.9	J						

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

D = The reported result is from a dilution.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor air analytical data from March 2008 were collected under non-routine operating conditions, with the Building 7/8 basement ventilation fans turned off and covered with plastic. The March 2008 indoor air analytical data from the Building 7 daycare and Building 7/8 basement were conducted to be biased high based on re-sampling performed in April 2008; therefore, these data are not usable for evaluating historical trends in indoor air concentrations.

[b] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(A-5) - 115 River Road Historical Air Data
Buildings 8 and 9 Indoor Air Analytical Data - March 2006, July 2006, March 2008, March 2013, December 2013, April 2014, March 2015, and December 2015
Quanta Site, Edgewater, New Jersey

					Building	**Building 8**																							
					Location	**Q1-IA-06**								**Q1-IA-07**				**Q1-IA-42**						**Q1-IA-43**					
					Location Description	**Bldg 8 2nd floor, Conference Room**								**Bldg 8 2nd floor, Middle Office**				**Suite 824 - Inner Office Near Elevator**						**Suite 830 - Entrance Area Near Elevator**					
					Field Sample ID	**Q1-IA-06-031906**		**Q1-IA-09-031906**		**Q1-IA-06-073006**		**Q1-IA-06-032308**		**Q1-IA-07-031906**		**Q1-IA-07-073006**		**Q1-IA-42-121913**		**Q1-IA-42-031115**		**Q1-IA-42-121615**		**Q1-IA-43-121913**		**Q1-IA-43-031115**		**Q1-IA-43-121815**	
					Sample Date	**3/19/2006**		**3/19/2006**		**7/30/2006**		**3/23/2008**		**3/19/2006**		**7/30/2006**		**12/19/2013**		**3/11/2015**		**12/16/2015**		**12/19/2013**		**3/11/2015**		**12/18/2015**	
					Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
		EPA Commercial IASLs																											
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																								
71-43-2	Benzene	1.6	160	130	2	0.88		0.68		0.61		0.61		0.72		0.63		2.2		1.6		0.64		2.2		1.9		0.86	
100-41-4	Ethylbenzene	4.9	490	4,400	5	1.1		0.26		0.66		0.36	J	0.64		0.67		2.3		1.8		0.65	J	3.2		2.3		2.1	
91-20-3	Naphthalene	0.36	36	13	3	2.1		0.33		2.3		0.97		1.6		2.8		1.8	B, L	0.90		0.62		3.9	B, L	1.8		3.8	J
79-01-6	Trichloroethene	3.0	300	8.8	3	0.96		0.023	U	0.22		0.77	U	0.25		0.40		NA		NA		0.090	J	NA		NA		0.67	
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	1.0		0.30		0.68		0.5	J	0.66		0.79		1.4		1.7		0.59	J	1.8		1.8		6.8	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.35		0.10	J	0.23		0.16	J	0.22		0.25		0.43	J	0.46		0.17	J	0.59	J	0.52		2.3	
108-38-3	o-Xylene	Not Available		440	Not Available	1.2		0.31		0.72		0.34	J	0.83		0.71		1.9		2.3		0.72	J	4.1		2.3		2.5	
NA	m&p-Xylene[2]	Not Available				3.3		0.79		2.0		0.97	J	2.2		1.9		6.0		7.2		2.0		9.3		7.2		6.9	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	4.5		1.1		2.7		1.3		3.0		2.6		7.9		9.5		2.7	J	13		9.5		9.4	

Notes:
Shaded indicates the value is greater than or equal to one or more of the IASLs
NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013
The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air
D= The reported result is from a dilution.
U = Below the laboratory method detection limits
J = Data below calibration curve for that constituent, quantity estimated
B = Analyte detected in both the sample and associated method blank
L = Laboratory control sample recovery outside the client specified limits; results may be biased low
[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene
[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

Appendix G-3(A-5) - 115 River Road Historical Air Data

Buildings 8 and 9 Indoor Air Analytical Data - March 2006, July 2006, March 2008, March 2013, December 2013, April 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Building	**Building 9**																			
					Location	**Q1-IA-04 and Q1-IA-40**														**Q1-IA-05**					
					Location Description	**Bldg 9 1st Floor, West Side**														**Bldg 9 2nd Floor Office, West**					
					Field Sample ID	**Q1-IA-04-031906**		**Q1-IA-04-073006**		**Q1-IA-04-032308**		**Q1-IA-40-032113**		**Q1-IA-40-121813**		**Q1-IA-40-031115**		**Q1-IA-40-121615**		**Q1-IA-05-031906**		**Q1-IA-05-073006**		**Q1-IA-05-032308**	
					Sample Date	**3/19/2006**		**7/30/2006**		**3/23/2008**		**3/21/2013**		**12/18/2013**		**3/11/2015**		**12/16/2015**		**3/19/2006**		**7/30/2006**		**3/23/2008**	
					Units	**μg/m^3**		**μg/m^3**		**μg/m^3**		**μg/m^3**		**μg/m^3**		**μg/m^3**		**μg/m^3**		**μg/m^3**		**μg/m^3**		**μg/m^3**	
		EPA Commercial IASLs																							
Cas #	**Parameter Name**	**10^{-6} Target Risk (μg/m³)**	**10^{-4} Target Risk (μg/m³)**	**HQ=1 Target Risk (μg/m³)**	**NJDEP Nonresidential IASL (μg/m³)**																				
71-43-2	Benzene	1.6	160	130	2	0.99		1.1		1.8		3.2		4.0		1.6		0.58		1.0		1.7	J	1.9	
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.99		1.8		1.4		2.0		2.6		0.83		0.23	J	0.99		2		1.4	
91-20-3	Naphthalene	0.36	36	13	3	2.2		1.4		1.5		2.2		0.76		0.5		0.25		2.1		2		1.2	
79-01-6	Trichloroethene	3.0	300	8.8	3	0.059	U	0.30		0.19	U	NA		NA		NA		0.035	J	0.082	U	0.15	U	0.22	U
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	1.1		1.3		0.87		1.4		1.0		0.9		0.32	J	1.1		1.3	J	0.81	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.39		0.46		0.33	J	0.51	J	0.35	J	0.29		0.088	J	0.46		0.53	J	0.33	J
108-38-3	o-Xylene	Not Available		440	Not Available	0.97		1.6		1.1		1.6		1.4		0.9		0.32	J	1.0		2.0		1.2	
NA	m&p-Xylene[2]	Not Available				2.3		3.6		2.5		3.6		2.3		2.2		0.75		2.3		3.9		2.7	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	3.3		5.2		3.6		5.2		3.7		3.1		1.1	J	3.3		5.9		3.9	

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

Appendix G-3(A-5) - 115 River Road Historical Air Data

Buildings 8 and 9 Indoor Air Analytical Data - March 2006, July 2006, March 2008, March 2013, December 2013, April 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

		EPA Commercial IASLs																	
Building						**Building 9**													
Location						**Q1-IA-41**													
Location Description						**Bldg 9 1st Floor East Side Storage Room**													
Field Sample ID						**Q1-IA-41-032113**		**Q1-IA-41-121813**		**Q1-DUP1-121813**		**Q1-IA-41-040814**		**Q1-DUP1-040814**		**Q1-IA-41-031215**		**Q1-IA-41-121615**	
Sample Date						**3/21/2013**		**12/18/2013**				**4/8/2014**				**3/12/2015**		**12/16/2015**	
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m3**		**µg/m3**	
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**														
71-43-2	Benzene	1.6	160	130	2	5.9		20		22		5.7		5.5		0.59		0.51	
100-41-4	Ethylbenzene	4.9	490	4,400	5	7.2		28		30		5.3	U	4.8	U	0.31		0.22	J
91-20-3	Naphthalene	0.36	36	13	3	5.4		29		100		1.1	L	0.69	J, L	0.055		0.16	
79-01-6	Trichloroethene	3.0	300	8.8	3	NA		NA		NA		NA		NA		NA		0.040	J
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	3.5		12		16		5.3	U	4.8	U	0.21		0.30	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	1.6		3.9		4.9		5.3	U	4.8	U	0.071	J	0.085	J
108-38-3	o-Xylene	Not Available		440	Not Available	4.8		13		14		5.3	U	4.8	U	0.33		0.31	J
NA	m&p-Xylene[2]	Not Available				9.1		19		21		5.3	U	4.8	U	0.82		0.73	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	14		32		35		5.3	U	4.8	U	1.2		1.0	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

Appendix G-3(A-6) - 115 River Road Historical Air Data

Buildings 10 and 11 Indoor Air Analytical Data - March 2006, July 2006, March 2008, March 2009, March 2010, May 2010, March 2011, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

						Building	**Building 10**																		
						Location	**Q1-IA-01**				**Q1-IA-02**					**Q1-IA-03**									
						Location Description	**Bldg 10 3rd floor conference room**				**Bldg 10 1st Floor, Right stairwell at entrance**					**Bldg 10 Basement in northeastern most storage room**									
						Field Sample ID	**Q1-IA-01-031906**		**Q1-IA-01-073006**		**Q1-IA-02-031906**		**Q1-IA-02-073006**		**Q1-IA-02-032808**	**Q1-IA-03-031906**		**Q1-IA-03-073006**		**Q1-IA-03-032308**		**Q1-IA-03-031015**		**Q1-IA-03-121615**	
						Sample Date	**3/19/2006**		**7/30/2006**		**3/19/2006**		**7/30/2006**		**3/28/2008**	**3/19/2006**		**7/30/2006**		**3/28/2008**		**3/10/2015**		**12/16/2015**	
						Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
Cas #	**Parameter Name**	**EPA Commercial IASLs**			**NJDEP Nonresidential IASL (µg/m³)**																				
		10^{-6} Target Risk (µg/m³)	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																					
71-43-2	Benzene	1.6	160	130	2		0.89		0.90		0.73		0.93		0.56	0.73		1.1		0.76		2.1		0.54	
100-41-4	Ethylbenzene	4.9	490	4,400	5		1.2		4.6		0.55		2.2		0.69	U	0.24		1.7		0.48	J	1.2		0.23	J
91-20-3	Naphthalene	0.36	36	13	3		1.3		8.3		0.37		2.1		0.14	U	0.36		1.6		0.31		1.2		0.18	
79-01-6	Trichloroethene	3.0	300	8.8	3		0.27		0.26		0.087	U	0.29		0.69	U	0.043	U	0.33		0.75	U	NA		0.035	J
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available		1.0		16		0.54		5.1		0.69	U	0.32		2.6		0.27	J	0.82		0.28	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available		0.32		4.1		0.18		1.3		0.69	U	0.11	J	0.86		0.75	U	0.24		0.090	J
108-38-3	o-Xylene	Not Available		440	Not Available		1.5		6.6		0.79		2.8		0.69	U	0.32		2		0.43	J	0.96		0.27	J
NA	m&p-Xylene[2]	Not Available					4.7		16		2.1		6.6		0.35	J	0.81		4.9		1.4	J	2.2		0.62	J
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440		6.2		23		2.9		9.4		1.0		1.1		6.9		1.8		3.2		0.9	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

NA = Not Analyzed

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(A-6) - 115 River Road Historical Air Data

Buildings 10 and 11 Indoor Air Analytical Data - March 2006, July 2006, March 2008, March 2009, March 2010, May 2010, March 2011, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Building						**Building 10**																													
Location						**Q1-IA-22**																								**Q1-IA-44**					
Location Description						**Bldg 10 Basement Main Room**																								**Suite 1001 - Center of Main Room**					
Field Sample ID						**Q1-IA-22-032308**		**Q1-IA-22-032209**		**Q1-IA-22-032110[a]**		**Q1-IA-22-052210**		**Q1-IA-22-033111**		**Q1-IA-22-032013**		**Q1-IA-22-121913**		**Q1-IA-22-031115**		**Q1-IA-22-121615**		**Q1-IA-44-121813**		**Q1-IA-44-031115**		**Q1-IA-44-121615**					
Sample Date						**3/23/2008**		**3/22/2009**		**3/21/2010**		**5/22/2010**		**3/31/2011**		**3/20/2013**		**12/19/2013**		**3/11/2015**		**12/16/2015**		**12/18/2013**		**3/11/2015**		**12/16/2015**					
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**					
Cas #	**Parameter Name**	**EPA Commercial IASLs**			**NJDEP Nonresidential IASL (µg/m³)**																														
		10^{-6} Target Risk (µg/m³)	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																														
71-43-2	Benzene	1.6	160	130	2	0.79		1.4		1.8		0.69		0.65		1.4		2.0		2.5		0.66		1.5		2.4		0.65					
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.81		1.7		0.87		1.2		0.50	J	0.76	J	0.49	J	1.5		0.20	J	0.84		1.3		0.43	J				
91-20-3	Naphthalene	0.36	36	13	3	0.55		0.85		0.84		0.69		0.41		0.55		0.69	B, L	1.8		0.036		0.81		0.26		0.098					
79-01-6	Trichloroethene	3.0	300	8.8	3	0.59	U	0.16		0.027	U	0.10	U	NA		NA		NA		NA		0.037	J	NA		NA		0.18					
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.44	J	2.7		1.1		1.1		0.40	J	0.63	J	0.65		1.3		0.20	J	2.2		1.1		0.45	J				
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.17	J	0.89		0.79		0.36	J	0.68	U	0.27	J	0.21	J	0.46		0.087	J	0.66	J	0.32		0.14	J				
108-38-3	o-Xylene	Not Available		440	Not Available	0.64		1.4		0.74		1.0		0.39	J	0.61	J	0.70		1.2		0.25	J	0.97		1.4		0.50	J				
NA	m&p-Xylene[2]	Not Available				2.4		4.8		2.7		3.4		1.5		1.3		1.5		2.7		0.62	J	2.3		4.4		1.4					
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	3.0		6.2		3.5		4.4		1.9	J	1.9	J	2.2		3.9		0.9	J	3.3		5.8		1.9	J				

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

NA = Not Analyzed

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(A-6) - 115 River Road Historical Air Data

Buildings 10 and 11 Indoor Air Analytical Data - March 2006, July 2006, March 2008, March 2009, March 2010, May 2010, March 2011, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Building						**Building 10**							Building 10		**Building 11**										
Location						**Q1-IA-45**							**Q1-IA-46**		**Q1-IA-39**										
Location Description						**Suite 1003 - Center of Reception Area**							**Suite 1026 - Staircase in Back of Office**		**Bldg 11 Center of Main Room**	**Bldg 11 West Side of Main Room**									
Field Sample ID						**Q1-IA-45-121813**		**Q1-IA-45-031115**		**Q1-IA-45-121615**			**Q1-IA-46-121715**		**Q1-IA-39-040111**	**Q1-IA-39-032013**		**Q1-IA-39-121813**		**Q1-IA-39-031115**		**Q1-IA-39-121615**			
Sample Date						**12/18/2013**		**3/11/2015**		**12/16/2015**			**12/17/2015**		**4/1/2011**	**3/20/2013**		**12/18/2013**		**3/11/2015**		**12/16/2015**			
Units						**µg/m³**		**µg/m³**		**µg/m³**			**µg/m³**		**µg/m³**	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**			
		EPA Commercial IASLs																							
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																				
71-43-2	Benzene	1.6	160	130	2	1.1		3.0		0.57			0.97		2.3	0.72		0.98		1.9		0.53			
100-41-4	Ethylbenzene	4.9	490	4,400	5	0.44	J	1.9		0.33	J		0.60	J	1.9	0.42	J	0.67	J	0.93		0.34	J		
91-20-3	Naphthalene	0.36	36	13	3	1.4		4.8		0.41			0.91		0.52	0.24		1.5		0.6		0.31			
79-01-6	Trichloroethene	3.0	300	8.8	3	NA		NA		0.099	J		0.14	J	NA	NA		NA		NA		0.041	J		
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	0.51	J	1.6		0.46	J		0.50	J	2.0	0.56	J	0.45	J	0.86		0.47	J		
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.86	U	0.6		0.14	J		0.15	J	0.52	J	0.73	U	0.71	U	0.28		0.13	J		
108-38-3	o-Xylene	Not Available		440	Not Available	0.44	J	1.5		0.45	J		0.56	J	1.9	0.61	J	0.78		0.99		0.49	J		
NA	m&p-Xylene[2]	Not Available				1.2		3		1.2			1.5		6.2	6.2		4.7		3.4		1.8			
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	1.6	J	4.5		1.7	J		2.1	J	8.1	6.8	J	5.5		4.4		2.3	J		

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

NA = Not Analyzed

B = Analyte detected in both the sample and associated method blank

L = Laboratory control sample recovery outside the client specified limits; results may be biased low

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-3(B) - 115 River Road Historical Air Data

Crawl Space Air Analytical Data - March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

		EPA Commercial IASLs																													
Building						Building 6																									
Location						Q1-CS-01																									
Location Description						Northwest Side (through Bldg 7/8 basement access point)																									
Field Sample ID						Q1-CS-01-032010[a]		Q1-DUP3-032010[a]		Q1-CS-01-052210		Q1-DUP3-052210		Q1-CS-01-033111		Q1-DUP3-033111		Q1-CS-01-032312		Q1-DUP2-032312		Q1-CS-01-032013		Q1-DUP3-032013		Q1-CS-01-121913		Q1-DUP3-121913		Q1-CS-01-052015		Q1-DUP3-052015		Q1-CS-01-121715		Q1-DUP2-121715	
Sample Date						3/20/2010[a]				5/22/2010				3/31/2011				3/23/2012				3/20/2013				12/19/2013				5/20/2015				12/17/2015			
Units						µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**	**NJDEP Nonresidential IASL (µg/m³)**																																
71-43-2	Benzene	1.6	160	130	2	3.5		3.2	J	1.2	J	2.9	J	0.87		0.86		1.1		1.0		3.4		3.6		1.7		1.6		1.6		1.6		1.1		1.1	
100-41-4	Ethylbenzene	4.9	490	4,400	5	2.1		1.8	J	2.0		2.9		1.7		1.6		2.8		2.8		3.6		3.6		1.8		1.7		1.8		0.95		0.79		
91-20-3	Naphthalene	0.36	36	13	3	1.8	J	1.0	J	1.2	J	2.1	J	1.3		1.1		1.3		1.2		1.3		0.99		0.8	B, L	0.68	B, L	1.9		2.4		0.43	J	0.15	J
79-01-6	Trichloroethene	3.0	300	8.8	3	0.86		0.86		0.50		0.58		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.61		0.61	
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	1.4		1.1	J	0.89		1.4		0.60	J	0.44	J	8.1		7.5		1.3		1.3		1.0		0.9		1.6		1.6		1.0		0.67	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.84		0.79		0.29	J	0.46	J	0.69	U	0.75	U	3.4		3.2		0.62	J	0.55	J	0.29	J	0.30	J	0.42		0.43		0.33	J	0.23	J
108-38-3	o-Xylene	Not Available		440	Not Available	1.4		1.2	J	1.4		2.3		0.60	J	0.59	J	2.3		2.2		2.2		2.1		1.6		1.5		1.9		1.9		1.1		0.90	
NA	m&p-Xylene[2]	Not Available				5.2		4.2	J	5.8	J	8.1	J	4.8		4.5		8.2		8.1		6.5		6.1		4.5		4.2		5.5		5.6		3.2		2.5	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	6.5		5.6		7.2		10		5.4	J	5.1	J	11		10		8.7		8.2		6.1		5.7		7.4		7.5		4.3		3.4	

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

[b] = Location changed in March 2013 event; Building 3 North Side (through hole in floor)

Appendix G-3(B) - 115 River Road Historical Air Data

Crawl Space Air Analytical Data - March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

		EPA Commercial IASLs																																	
Building						**Building 6**						**Building 5**						**Building 4**																	
Location						**Q1-CS-02**						**Q1-CS-03**						**Q1-CS-04**																	
Location Description						**Bldg 6 SW side**						**Bldg 5 N side**						**South Side (through exterior vent)**																	
Field Sample ID						**Q1-CS-02-032010[a]**		**Q1-CS-03-052210**		**Q1-CS-02-033111**		**Q1-CS-03-032010[a]**		**Q1-CS-03-032010**		**Q1-CS-03-033111**		**Q1-CS-04-032010[a]**		**Q1-CS-04-052210**		**Q1-CS-04-033111**		**Q1-CS-04-032312**		**Q1-CS-04-032013**		**Q1-CS-04-121913**		**Q1-CS-04-031215**		**Q1-CS-04-121715**	
Sample Date						**3/20/2010[a]**		**5/22/2010**		**3/31/2011**		**3/20/2010[a]**		**5/22/2010**		**3/31/2011**		**3/20/2010[a]**		**5/22/2010**		**3/31/2011**		**3/23/2012**		**3/20/2013**		**12/19/2013**		**3/12/2015**		**12/17/2015**	
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m3**		**µg/m3**	
Cas #	**Parameter Name**	**10^{-6} Target Risk (µg/m³)**		**10^{-4} Target Risk (µg/m³)**		**HQ=1 Target Risk (µg/m³)**		**NJDEP Nonresidential IASL (µg/m³)**																													
71-43-2	Benzene	1.6		160		130		2		6.1		2.1		1.3		2.9		2.1		0.63		4.8		3.7		1.1		1.4		0.95		1.1		3.3		0.85	
100-41-4	Ethylbenzene	4.9		490		4,400		5		3.6		2.9		2.9		1.2		1.4		0.65	J	2.3		2.5		1.6		1.4		0.78		0.70		1.3		0.37	J
91-20-3	Naphthalene	0.36		36		13		3		0.79		0.46		0.87		2.5		0.67		0.67		2.4	J	3.5		1.5		3.0		0.17		1.7	L	0.36		1.1	
79-01-6	Trichloroethene	3.0		300		8.8		3		1.5		1.0		NA		0.59		0.32		NA		0.59		0.25		NA		NA		NA		NA		NA		0.053	J
95-63-6	1,2,4-Trimethylbenzene	Not Available				31		Not Available		0.98		1.4		0.28	J	0.98		1.2		0.18	J	1.6		1.9		0.42	J	2.2		0.41	J	0.62	J	1.5		0.49	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available				31		Not Available		0.88		0.44	J	0.85	U	0.74		0.34	J	0.70	U	0.93		0.62	J	0.70	U	0.77		0.67	U	0.69	U	0.38		0.14	J
108-38-3	o-Xylene	Not Available				440		Not Available		1.9		2.2		0.59	J	0.83		1.2		0.24	J	1.7		2.3		0.71		1.2		0.55	J	0.76		1.3		0.48	J
NA	m&p-Xylene[2]	Not Available								5.6		11		7.6		2.5		4.8		1.7		4.8		6.9		3.7		3.4		2.1		1.9		3.8		1.1	
1330-20-7	Xylenes (total) - sum of isomers	Not Available				440		440		7.4		13		8.2	J	3.3		6.0		1.9	J	6.5		9.2		4.4		4.6		2.7	J	2.7		5.1		1.6	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

[b] = Location changed in March 2013 event; Building 3 North Side (through hole in floor)

Appendix G-3(B) - 115 River Road Historical Air Data

Crawl Space Air Analytical Data - March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Building	Building 3																					
					Location	Q1-CS-05																Q1-CS-06					
					Location Description	Bldg 3 SW side[b]																Bldg 3 SE side					
					Field Sample ID	Q1-CS-05-032010[a]		Q1-CS-05-052210		Q1-CS-05-033111		Q1-CS-05-032312		Q1-CS-05-032013[b]		Q1-CS-05-122013		Q1-CS-05-031215		Q1-CS-05-121715		Q1-CS-06-032010[a]		Q1-CS-06-052210		Q1-CS-06-033111	
					Sample Date	3/20/2010[a]		5/22/2010		3/31/2011		3/23/2012		3/20/2013		12/20/2013		3/12/2015		12/17/2015		3/20/2010[a]		5/22/2010		3/31/2011	
					Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m3		µg/m3		µg/m³		µg/m³		µg/m³	
		EPA Commercial IASLs																									
Cas #	Parameter Name	10^{-6} Target Risk (µg/m³)	10^{-4} Target Risk (µg/m³)	HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential IASL (µg/m³)																						
71-43-2	Benzene	1.6	160	130	2	4.5		5.1		0.87		1.2		1.1		4.2		3.2		1.9		6.4		4.5		0.64	
100-41-4	Ethylbenzene	4.9	490	4,400	5	2.0		3.1		0.94		1.1		1.3		2.6		5.4		0.34	J	2.6		2.9		0.58	J
91-20-3	Naphthalene	0.36	36	13	3	6.8		2.4		0.70		1.3		1.7		2.0	L	1.8		0.55		5.0		4.6		0.15	
79-01-6	Trichloroethene	3.0	300	8.8	3	0.59		0.25		NA		NA		NA		NA		NA		0.035	J	0.59		0.35		NA	
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	1.7		2.3		0.26	J	3.5		0.86		1.6		1.6		0.38	J	1.9		1.8		0.18	J
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.93		0.72	J	0.61	U	1.1		0.33	J	0.57	J	0.55		0.12	J	0.98		0.63	J	0.60	U
108-38-3	o-Xylene	Not Available		440	Not Available	1.6		3.0		0.35	J	1.0		0.85		2.2		1.7		0.43	J	2.0		2.2		0.23	J
NA	m&p-Xylene[2]	Not Available				4.8		8.4		2.1		2.9		3.1		5.1		3.6		1.1		4.8		7.0		1.4	
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	6.1		11		2.5	J	3.9		4.0		7.3		5.3		1.5	J	6.9		9.2		1.6	J

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

[b] = Location changed in March 2013 event; Building 3 North Side (through hole in floor)

Appendix G-3(B) - 115 River Road Historical Air Data

Crawl Space Air Analytical Data - March 2010, May 2010, March 2011, March 2012, March 2013, December 2013, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

					Building	**Building 2**																	
					Location	**Q1-CS-07**																	
					Location Description	**South Side (through exterior vent)**																	
					Field Sample ID	**Q1-CS-07-052210**		**Q1-CS-07-033111**		**Q1-CS-07-032312**		**Q1-CS-07-032013**		**Q1-CS-07-121913**		**Q1-CS-07-031215**		**Q1-CS-07-121715**					
					Sample Date	**5/22/2010**		**3/31/2011**		**3/23/2012**		**3/20/2013**		**12/19/2013**		**3/12/2015**		**12/17/2015**					
					Units	**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m3**		**µg/m3**					
Cas #	**Parameter Name**	**EPA Commercial IASLs**			**NJDEP Nonresidential IASL (µg/m³)**																		
		10^{-6} Target Risk (µg/m³)	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																			
71-43-2	Benzene	1.6	160	130	2	2.6		1.2		1.5		1.0		1.1		0.75		0.80					
100-41-4	Ethylbenzene	4.9	490	4,400	5	2.2		1.1		1.5		0.81		0.54	J	0.33		0.35	J				
91-20-3	Naphthalene	0.36	36	13	3	6.1		0.53		2.5		1.4		1.2	B, L	0.28		0.22					
79-01-6	Trichloroethene	3.0	300	8.8	3	0.32		NA		NA		NA		NA		NA		0.041	J				
95-63-6	1,2,4-Trimethylbenzene	Not Available		31	Not Available	1.4		0.30	J	4.2		0.49	J	0.59	J	0.38		0.45	J				
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		31	Not Available	0.49	J	0.70	U	1.5		0.68	U	0.7	U	0.11	J	0.13	J				
108-38-3	o-Xylene	Not Available		440	Not Available	1.7		0.48	J	1.2		0.54	J	0.69	J	0.39		0.44	J				
NA	m&p-Xylene[2]	Not Available				5.2		2.2		3.0		1.8		1.8		1.1		1.2					
1330-20-7	Xylenes (total) - sum of isomers	Not Available		440	440	6.9		2.7	J	4.2		2.3	J	2.5	J	1.5		1.6	J				

Notes:

Shaded indicates the value is greater than or equal to one or more of the IASLs.

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013)

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air.

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene.

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

[b] = Location changed in March 2013 event; Building 3 North Side (through hole in floor)

Appendix G-3(C) - 115 River Road Historical Air Data

Subslab Soil Gas Analytical Data - March 2006, July 2006, March 2008, March 2009, March 2010, May 2010, April 2011, March 2013, and March 2015

Quanta Site, Edgewater, New Jersey

		EPA Commercial SGSLs																											
		10^{-6} Target Risk ($\mu g/m^3$)	10^{-4} Target Risk ($\mu g/m^3$)	HQ=1 Target Risk ($\mu g/m^3$)	NJDEP Nonresidential SGSL ($\mu g/m^3$)																								
Building						**Building 7/8**																							
Location						**Q1-VI-06**																							
Location Description						**Bldg 7/8 basement next to Sump 1**																							
Field Sample ID						**Q1-VI-06-031906**		**Q1-VI-06-072906**		**Q1-VI-06-032408**		**Q1-VI-06-032109**		**Q1-DUP1-032109**		**Q1-VI-06-032210**		**Q1-DUP1-032210**		**Q1-VI-06-052410**		**Q1-DUP1-052410**		**Q1-VI-06-040111**		**Q1-DUP1-040111**	
Sample Date						**3/19/2006**		**7/29/2006**		**3/24/2008**		**3/21/2009**		**3/21/2009**		**3/22/2010**		**3/22/2010**		**5/24/2010**		**5/24/2010**		**4/1/2011**			
Units						**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**		**$\mu g/m^3$**	
Cas #	**Parameter Name**																												
71-43-2	Benzene	52	5,200	4,400	79	48		130		8.9		0.90	J	1.0	J	0.64		0.67		0.65	U	0.65	J	1.9	U	1.8	U		
100-41-4	Ethylbenzene	160	16,000	150,000	250	43		160		5.5	J	2.0	U	2.0	U	0.087	U	0.087	U	0.65	U	0.6	U	1.9	U	1.8	U		
91-20-3	Naphthalene	12	1,200	440	26	120	J	1.1		7.8	U	13		16		0.68		0.73		1.3	U	1.3	U	1.9	U	1.8	U		
79-01-6	Trichloroethene	100	10,000	290	150	23		7.8		3.2	U	1.0	U	2.3		1.0		0.97		4.3		4.3		NA		NA			
95-63-6	1,2,4-Trimethylbenzene	Not Available		1,000	Not Available	12		10		4.3	J	2.5		3.1		--		--		7.9		7.6		5.5		5.7			
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		1,000	Not Available	5.3		14		2.7	J	2.0	U	2.0	U	0.10	U	0.10	U	0.68	U	0.7	U	1.9	U	1.8	U		
108-38-3	o-Xylene	Not Available		15,000	Not Available	38		140		4.2	J	2.0	U	2.0	U	0.087	U	0.087	U	0.71	U	0.7	U	1.9	U	1.8	U		
NA	m&p-Xylene[2]	Not Available				69		250		8.2	J	4.0	U	4.0	U	0.087	U	0.087	U	1.3	U	1.5	J	3.8	U	3.7	U		
1330-20-7	Xylenes (total) - sum of isomers	Not Available		15,000	22,000	110		390		12	J	4.0	U	4.0	U	0.09	U	0.09	U	1.3	U	1.5	J	3.8	U	3.7	U		

Notes:

Shaded indicates the value is greater than or equal to one or more of the SGSLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

NA = Not analyzed

Appendix G-3(C) - 115 River Road Historical Air Data

Subslab Soil Gas Analytical Data - March 2006, July 2006, March 2008, March 2009, March 2010, May 2010, April 2011, March 2013, and March 2015

Quanta Site, Edgewater, New Jersey

						Building	Building 8						Building 9												Building 10		
						Location	Q1-VI-03		Q1-VI-09				Q1-VI-10												Q1-VI-02		
						Location Description	Bldg 8 Basement Former Office Area		Bldg 8 Basement, Elevator Shaft				Bldg 9 1st Floor West Side												Bldg 10 Basement Main Room		
						Field Sample ID	Q1-VI-03-072906		Q1-VI-09-031906		Q1-VI-09-072906		Q1-VI-10-032010		Q1-VI-10-052210		Q1-VI-10-040111		Q1-VI-10-032113		Q1-VI-02-032508							
						Sample Date	7/29/2006		3/19/2006		7/29/2006		3/20/2010		5/24/2010		4/1/2011		3/21/2013		3/25/2008							
						Units	µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³							
		EPA Commercial SGSLs																										
Cas #	Parameter Name	10^{-6} Target Risk (µg/m³)	10^{-4} Target Risk (µg/m³)	HQ=1 Target Risk (µg/m³)	NJDEP Nonresidential SGSL (µg/m³)																							
71-43-2	Benzene	52	5,200	4,400	79		4,900		43		1.1		0.73		0.68	U	2.0	U	0.68		1.9							
100-41-4	Ethylbenzene	160	16,000	150,000	250		2,400		38		0.88		0.087	U	0.68	U	2.0	U	2.0	U	2.3							
91-20-3	Naphthalene	12	1,200	440	26		860		62	J	1.7		0.79		1.4	J	2.0	U	2.0	U	1.9	U						
79-01-6	Trichloroethene	100	10,000	290	150		0.92		22		0.70		0.59		0.75	U	NA		NA		1.9	U						
95-63-6	1,2,4-Trimethylbenzene	Not Available		1,000	Not Available		8.4	U	12		13		--		1.0	J	2.0	U	0.69	J	0.42	J						
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		1,000	Not Available		240		4.9		0.40	J	0.10	U	0.72	U	2.0	U	2.0	U	2.5							
108-38-3	o-Xylene	Not Available		15,000	Not Available		1,200		31		0.78		0.087	U	0.75	U	2.0	U	2.0	U	3.3							
NA	m&p-Xylene[2]	Not Available					3,200		57		2.3		0.087	U	1.4	U	4.1	U	1.4	J	8.9							
1330-20-7	Xylenes (total) - sum of isomers	Not Available		15,000	22,000		4,400		88		3.1		0.09	U	1.4	U	4.1	U	1.4	J	3.8							

Notes:

Shaded indicates the value is greater than or equal to one or more of the SGSLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

NA = Not analyzed

Appendix G-3(C) - 115 River Road Historical Air Data

Subslab Soil Gas Analytical Data - March 2006, July 2006, March 2008, March 2009, March 2010, May 2010, April 2011, March 2013, and March 2015

Quanta Site, Edgewater, New Jersey

Building						**Building 12**																			
Location						**Q1-VI-07**										**Q1-VI-08**									
Location Description						**Bldg 12 Parking Lot East Side**										**Bldg 12 Parking Lot West Side**									
Field Sample ID						**Q1-VI-07-031906**		**Q1-VI-07-032608**		**Q1-VI-07-032109**		**Q1-VI-07-032010**		**Q1-VI-07-052210**		**Q1-VI-08-031906**		**Q1-VI-08-072906**		**Q1-VI-08-032508**		**Q1-VI-08-032109**		**Q1-VI-08-032010**	
Sample Date						**3/19/2006**		**3/26/2008**		**3/21/2009**		**3/20/2010**		**5/24/2010**		**3/19/2006**		**7/29/2006**		**3/25/2008**		**3/21/2009**		**3/20/2010**	
Units						**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
Cas #	**Parameter Name**	**EPA Commercial SGSLs**			**NJDEP Nonresidential SGSL (µg/m³)**																				
		10^{-6} Target Risk (µg/m³)	**10^{-4} Target Risk (µg/m³)**	**HQ=1 Target Risk (µg/m³)**																					
71-43-2	Benzene	52	5,200	4,400	79	3.2	J	2.0		2.0	U	0.64		0.65	U	0.82	J	0.74	J	0.65	J	2.0	U	0.77	
100-41-4	Ethylbenzene	160	16,000	150,000	250	2.5	J	1.3	J	2.0	U	0.087	U	0.65	U	1.4	J	0.58		0.38	J	2.0	U	0.087	U
91-20-3	Naphthalene	12	1,200	440	26	22	J	1.8	U	7.6		0.84		1.3	U	9.0	J	0.92		1.8	U	16		2.3	
79-01-6	Trichloroethene	100	10,000	290	150	0.042	U	1.8	U	2.0	U	0.027	U	0.72	U	0.12	U	0.71		1.8	U	2.0	U	0.54	
95-63-6	1,2,4-Trimethylbenzene	Not Available		1,000	Not Available	0.50	J	0.37	J	2.0	U	--		1.2	J	3.3	J	13		2.9		2.6		--	
108-67-8	1,3,5-Trimethylbenzene[1]	Not Available		1,000	Not Available	0.76	J	1.3	J	2.0	U	0.10	U	0.69	U	0.42	J	0.21	J	1.8	U	2.0	U	0.10	U
108-38-3	o-Xylene	Not Available		15,000	Not Available	1.3	J	2.2		2.0	U	0.087	U	0.72	U	0.59	J	0.39	J	0.47	J	0.52	J	0.087	U
NA	m&p-Xylene[2]	Not Available				2.5	J	6.5		3.9	U	0.087	U	1.3	U	1.6	J	1.5		1.4	J	4.0	U	0.087	U
1330-20-7	Xylenes (total) - sum of isomers	Not Available		15,000	22,000	3.8	J	8.7		3.9	U	0.09	U	1.3	U	2.2	J	1.9	J	1.9	J	0.52	J	0.09	U

Notes:

Shaded indicates the value is greater than or equal to one or more of the SGSLs

NJDEP RALs are from Table 2 of the NJDEP Vapor Intrusion Screening Level Tables (March 2013

The IASLs are based on the EPA 2015 Regional Screening Levels (November 2015) for Commercial Air

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated

[1] = NJDEP does not provide vapor intrusion screening levels for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene

[2] = o-Xylene and m&p-xylene were added together and compared to the screening level for total xylenes

NA = Not analyzed

Appendix G-4(D-1) - 115 River Road Historical Air Data

Outdoor Air Analytical Data 115 River Road Property - March 2006, July 2006, March 2008, April 2008, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013/January 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location		Q1-OA-01								Q1-OA-02								Q1-OA-03					
Location Description		Building 6 Roof								Building 10 Roof								115 RR Bldg South Parking Lot - on Fence					
Field Sample ID		Q1-OA-01-031906		Q1-OA-01-073006		Q1-OA-01-032308		Q1-OA-01-042708		Q1-OA-02-031906		Q1-OA-02-073006		Q1-OA-02-032308		Q1-OA-02-032010[a]		Q1-OA-03-031906		Q1-OA-03-073006		Q1-OA-03-032308	
Sample Date		3/19/2006		7/30/2006		3/23/2008		4/27/2008		3/19/2006		7/30/2006		3/23/2008		3/20/2010[a]		3/19/2006		7/30/2006		3/23/2008	
Units		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3	
Cas #	Parameter Name																						
71-43-2	Benzene	0.58		0.61		0.54		0.48		0.59		0.58		0.50		2.4		0.60		0.69		0.52	
100-41-4	Ethylbenzene	0.20		0.45		0.64	U	0.16	J	0.16		0.46		0.77	U	0.69		0.18		0.42		0.77	U
91-20-3	Naphthalene	0.19		0.73		0.13	U	0.13		0.13	U	0.51		0.15	U	1.2		0.14	U	0.38		0.15	U
79-01-6	Trichloroethene	0.025		0.042	U	0.64	U	0.60	U	0.014	U	0.040	U	0.77	U	1.1		0.020	U	0.18		0.77	U
95-63-6	1,2,4-Trimethylbenzene	0.21		0.69		0.64	U	0.19	J	0.12	J	0.51		0.77	U	1.3		0.20		0.50		0.77	U
108-67-8	1,3,5-Trimethylbenzene	0.061	J	0.25		0.64	U	0.60	U	0.023	J	0.17		0.77	U	0.74		0.064	J	0.14	J	0.77	U
108-38-3	o-Xylene	0.25		0.55		0.64	U	0.18	J	0.19		0.52		0.77	U	0.83		0.23		0.46		0.77	U
NA	m&p-Xylene	0.67		1.4		0.32	J	0.53	J	0.52		1.5		0.40	J	2.9		0.61		1.3		0.39	J
1330-20-7	Xylenes (total) - sum of isomers	0.92		2.0		0.32	J	0.71	J	0.71		2.0		0.40	J	3.7		0.84		1.8		0.39	J

Notes:

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-4(D-1) - 115 River Road Historical Air Data

Outdoor Air Analytical Data 115 River Road Property - March 2006, July 2006, March 2008, April 2008, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013/January 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location		Q1-OA-03 (con't)														Q1-OA-09													
Location Description		115 RR Bldg South Parking Lot - on Fence														South of 115 RR Bldg - Next to river													
Field Sample ID		Q1-OA-03-052210		Q1-OA-03-033111		Q1-OA-03-032312		Q1-OA-03-032113		Q1-OA-03-121813		Q1-OA-03-121813		Q1-OA-03-121615		Q1-OA-09-032010[a]		Q1-OA-09-052210		Q1-OA-09-033111		Q1-OA-09-032312		Q1-OA-09-032013		Q1-OA-09-121913		Q1-OA-09-031215		Q1-OA-09-121715	
Sample Date		5/22/2010		3/31/2011		3/23/2012		3/21/2013		12/18/2013		3/11/2015		12/16/2015		3/20/2010[a]		5/22/2010		3/31/2011		3/23/2012		3/20/2013		12/19/2013		3/12/2015		12/17/2015	
Units		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³		µg/m³	
Cas #	Parameter Name																														
71-43-2	Benzene	0.61		0.48		1.0		0.56		1.0		1.4		0.53		2.5		2.2		0.55		0.95		0.56		1.10		0.82		0.85	
100-41-4	Ethylbenzene	0.41	J	0.66	U	0.94		0.79	U	0.30	J	0.58		0.16	J	0.69		2.1		0.17	J	0.68	J	0.79	U	0.33	J	0.56		0.26	J
91-20-3	Naphthalene	0.27		0.096		0.45		0.047		0.72	U	0.74		0.11		2.3		0.49		0.27		0.16		0.15		0.13	B, L	1.5		**0.070**	
79-01-6	Trichloroethene	0.11	U	NA		NA		NA		NA		NA		0.019	J	0.027	U	0.091	U	NA		NA		NA		NA		NA		**0.071**	J
95-63-6	1,2,4-Trimethylbenzene	0.39	U	0.66	U	4.5		0.37	J	0.3	J	0.62		0.23	J	1.2		0.93		0.72	U	2.0		0.79	U	0.35	J	1.1		0.32	J
108-67-8	1,3,5-Trimethylbenzene	0.35	U	0.66	U	1.5		0.79	U	0.7	U	0.16		0.066	J	0.69		0.30	J	0.72	U	0.74		0.79	U	0.66	U	0.29		0.091	J
108-38-3	o-Xylene	0.42	J	0.66	U	0.95		0.79	U	0.36	J	0.67		0.20	J	0.74		1.7		0.72	U	0.68	J	0.79	U	0.45	J	0.68		0.32	J
NA	m&p-Xylene	1.1		0.66	U	2.6		0.79	U	0.9		1.7		0.51	J	2.5		4.9		0.46	J	1.9		0.79	U	0.93		1.5		0.90	
1330-20-7	Xylenes (total) - sum of isomers	1.5		0.66	U	3.6		0.79	U	1.3	J	2.4		0.71	J	3.3		6.6		0.46	J	2.6		0.79	U	1.4	J	2.2		1.2	J

Notes:

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-4(D-1) - 115 River Road Historical Air Data

Outdoor Air Analytical Data 115 River Road Property - March 2006, July 2006, March 2008, April 2008, March 2010, May 2010, March 2011, March 2012, March 2013, December 2013/January 2014, March 2015, and December 2015

Quanta Site, Edgewater, New Jersey

Location	Q1-OA-10																	
Location Description	NW Corner of Bldg 12																	
Field Sample ID	Q1-OA-10-052210		Q1-OA-10-033111		Q1-OA-10-032312		Q1-OA-10-032013		Q1-OA-10-011414		Q1-OA-10-031915		Q1-OA-10-052015		Q1-OA-10-121715	
Sample Date	5/22/2010		3/31/2011		3/23/2012		3/20/2013		1/14/2014		3/19/2015		5/20/2015		12/17/2015	
Units	µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3	
Cas #	Parameter Name																	
71-43-2	Benzene	0.74		0.49		0.92		0.58		1.7		0.82		0.49		0.87		
100-41-4	Ethylbenzene	0.49	J	0.71	U	0.63	J	0.74	U	0.91		0.20		0.29		0.31	J	
91-20-3	Naphthalene	0.40		0.19		0.64		0.040		0.28		0.11		0.36		0.15		
79-01-6	Trichloroethene	0.095	U	NA		NA		NA		NA		NA		NA		0.035	J	
95-63-6	1,2,4-Trimethylbenzene	0.53	J	0.71	U	4.5		0.74	U	0.45	J	0.25		0.33		0.34	J	
108-67-8	1,3,5-Trimethylbenzene	0.31	U	0.71	U	1.4		0.74	U	0.8	U	0.074		0.099	J	0.093	J	
108-38-3	o-Xylene	0.56	J	0.71	U	0.72	J	0.74	U	0.75	J	0.24		0.33		0.37	J	
NA	m&p-Xylene	1.4		0.71	U	2.0		0.51	J	2.5		0.63		0.83		0.96		
1330-20-7	Xylenes (total) - sum of isomers	2.0		0.71	U	2.7		0.51	J	3.3	J	0.87		1.2		1.3	J	

Notes:

D= The reported result is from a dilution.

U = Below the laboratory method detection limits

J = Data below calibration curve for that constituent, quantity estimated.

B = Analyte detected in both the sample and associated method blank.

L = Laboratory control sample recovery outside the client specified limits; results may be biased low.

[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

Appendix G-4(D-2) - 115 River Road Historical Air Data
Outdoor Air Analytical Data Quanta Site and Other Offsite Background Locations - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2015, and December 2015
Quanta Site, Edgewater, New Jersey

Location		**Q1-OA-04**								**Q1-OA-05**				**Q1-OA-06**																	
Location Description		**Quanta Site - Chained to North Fence at Side Entrance**								**Quanta Site - North Fence Center**				**Quanta Site - NE Corner at Bulkhead**																	
Field Sample ID		**Q1-OA-04-031906**		**Q1-OA-04-073006**		**Q1-OA-04-032308**		**Q1-OA-04-032209**		**Q1-OA-05-031906**		**Q1-OA-05-073006**		**Q1-OA-06-031906**		**Q1-OA-06-073006**		**Q1-OA-06-032308**		**Q1-OA-06-032209**		**Q1-OA-06-032010[a]**		**Q1-OA-06-052210**		**Q1-OA-06-033111**		**QI-OA-06-031915**		**Q1-OA-06-121615**	
Sample Date		**3/19/2006**		**7/30/2006**		**3/23/2008**		**3/22/2009**		**3/19/2006**		**7/30/2006**		**3/19/2006**		**7/30/2006**		**3/23/2008**		**3/22/2009**		**3/20/2010[a]**		**5/22/2010**		**3/31/2011**		**3/19/2015**		**12/16/2015**	
Units		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**		**µg/m³**	
Cas #	**Parameter Name**																														
71-43-2	Benzene	0.55		0.64		0.50		0.87		0.55		0.57		0.53		0.62		0.50		0.85		2.4		1.0		0.50		0.75		0.50	
100-41-4	Ethylbenzene	0.16		0.41		0.72	U	0.24	J	0.16		0.37		0.15		0.54		0.68	U	0.42	J	0.65		0.65	J	0.68	U	0.33		0.15	J
91-20-3	Naphthalene	0.15	U	0.30		0.14	U	0.28	U	0.0092	U	0.39		0.23		7.3		0.14	U	0.21	U	2.0		1.1		0.48		0.14		0.84	
79-01-6	Trichloroethene	0.014	U	0.036	U	0.72	U	0.14	U	0.023		0.021	U	0.022		0.021	U	0.68	U	0.13	U	0.027	U	0.092	U	NA		NA		0.019	J
95-63-6	1,2,4-Trimethylbenzene	0.14	J	0.42		0.72	U	0.20	J	0.15		0.42		0.16		0.67		0.68	U	0.29	J	1.0		0.70	J	0.68	U	0.81		0.19	J
108-67-8	1,3,5-Trimethylbenzene	0.039	J	0.12	J	0.72	U	0.072	J	0.045	J	0.13	J	0.057	J	0.25		0.68	U	0.15	J	0.69		0.30	U	0.68	U	0.21		0.059	J
108-38-3	o-Xylene	0.19		0.46		0.72	U	0.26	J	0.19		0.42		0.17		0.52		0.68	U	0.26	J	0.74		0.76		0.68	U	0.52		0.16	J
NA	m&p-Xylene	0.53		1.3		0.34	J	0.69	J	0.53		1.1		0.49		1.4		0.36	J	1.3		2.5		1.9		0.35	J	1.2		0.43	J
1330-20-7	Xylenes (total) - sum of isomers	0.72		1.8		0.34	J	0.95	J	0.72		1.5		0.66		1.9		0.36	J	1.6	J	3.2		2.7		0.35	J	1.7		0.59	J

Notes:
U = Below the laboratory method detection limits
J = Data below calibration curve for that constituent, quantity estimated.
[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

NA = Not analyzed

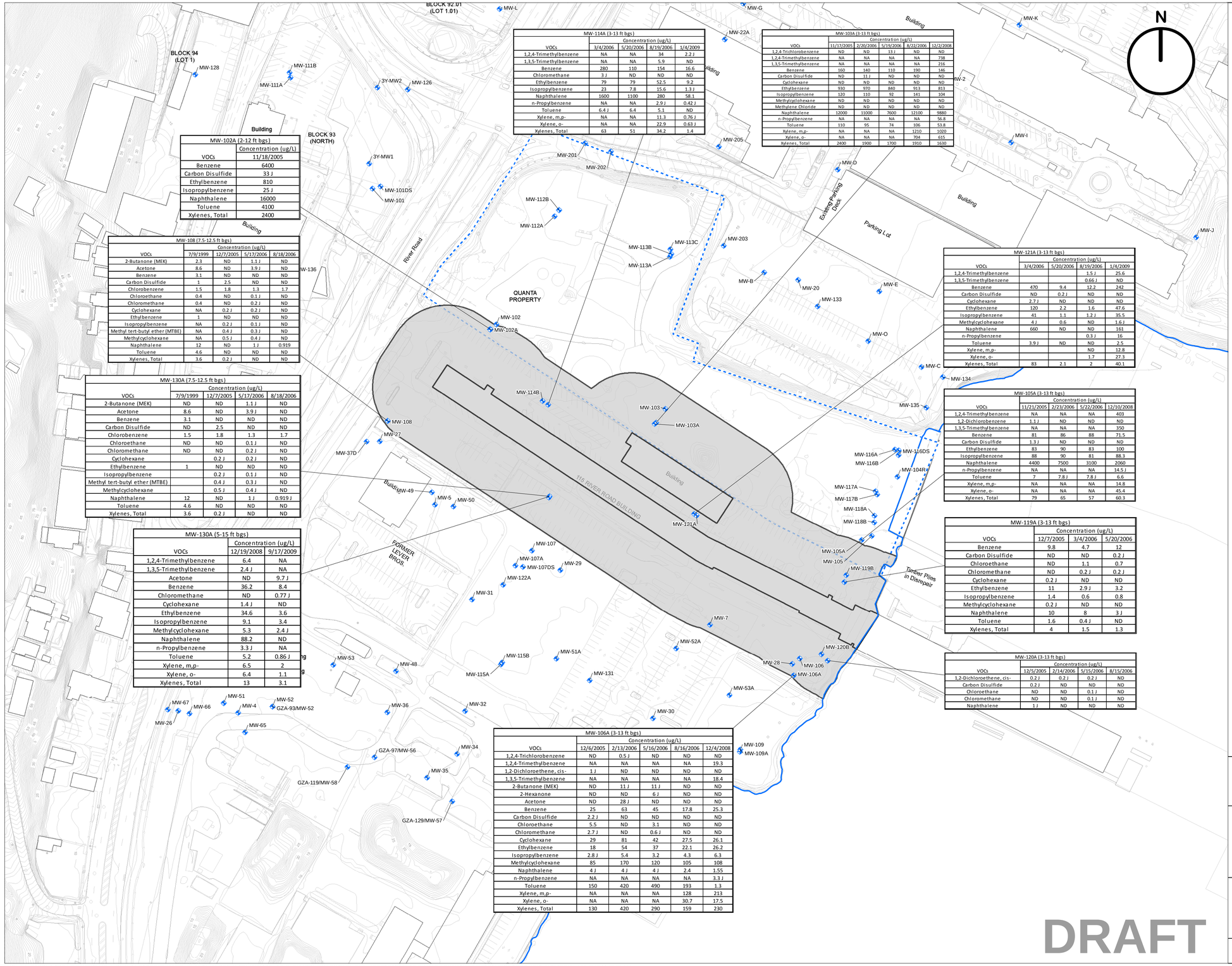
Appendix G-4(D-2) - 115 River Road Historical Air
Outdoor Air Analytical Data Quanta Site and Other Offsite Background Locations - March 2006, July 2006, March 2008, April 2008, March 2009, March 2010, May 2010, March 2011, March 2015, and December 2015
Quanta Site, Edgewater, New Jersey

Location		Q1-OA-07												Q1-OA-08			
Location Description		Ambulance Bldg - 915 River Road												Fire Department - 916 River Road			
Field Sample ID		Q1-OA-07-031906		Q1-OA-07-073006		Q1-OA-07-032308		Q1-OA-07-032209		Q1-OA-07-052210		Q1-OA-07-033111		Q1-OA-08-031906		Q1-OA-08-073006	
Sample Date		3/19/2006		7/30/2006		3/23/2008		3/22/2009		5/22/2010		3/31/2011		3/19/2006		7/30/2006	
Units		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3		µg/m^3	
Cas #	Parameter Name																
71-43-2	Benzene	0.56		0.74		0.56		1.0		0.77		0.95		0.68		0.87	
100-41-4	Ethylbenzene	0.15		0.38		0.82	U	0.34	J	0.54	J	0.70	U	0.23		0.62	
91-20-3	Naphthalene	0.13	U	0.44		0.16	U	0.24	U	0.18		0.098		0.13	U	0.53	
79-01-6	Trichloroethene	0.019		0.022	U	0.82	U	0.19		0.10	U	NA		0.021	U	0.068	U
95-63-6	1,2,4-Trimethylbenzene	0.15		0.49		0.82	U	0.30	J	0.59	J	0.70	U	0.29		0.87	
108-67-8	1,3,5-Trimethylbenzene	0.053	J	0.15	J	0.82	U	0.10	J	0.33	U	0.70	U	0.089	J	0.26	
108-38-3	o-Xylene	0.2		0.45		0.17	J	0.36	J	0.60	J	0.70	U	0.31		0.8	
NA	m&p-Xylene	0.52		1.2		0.45	J	1.0		1.6		0.40	J	0.85		2.2	
1330-20-7	Xylenes (total) - sum of isomers	0.72		1.7		0.62	J	1.4	J	2.2		0.40	J	1.2		3.0	

Notes:
U = Below the laboratory method detection limits
J = Data below calibration curve for that constituent, quantity estimated.
[a] = The indoor, crawl space, and outdoor air analytical data from March 2010 were concluded to be biased high based on the re-sampling in May 2010 (CH2M HILL, 2011a). This is likely because a different analytical laboratory (Accutest Laboratories instead of Columbia Analytical Services) was used in March 2010. The March 2010 data are not usable for evaluating historical trends in indoor and outdoor air concentrations due to the high bias.

NA = Not analyzed

Appendix H
Groundwater Concentration Figures



MW-102A (2-12 ft bgs)	
	Concentration (ug/L)
VOCs	11/18/2005
Benzene	6400
Carbon Disulfide	33 J
Ethylbenzene	810
Isopropylbenzene	25 J
Naphthalene	16000
Toluene	4100
Xylenes, Total	2400

MW-108 (7.5-12.5 ft bgs)				
	Concentration (ug/L)			
VOCs	7/9/1999	12/7/2005	5/17/2006	8/18/2006
2-Butanone (MEK)	2.3	ND	1.1 J	ND
Acetone	8.6	ND	3.9 J	ND
Benzene	3.1	ND	ND	ND
Carbon Disulfide	1	2.5	ND	ND
Chlorobenzene	1.5	1.8	1.3	1.7
Chloroethane	0.4	ND	0.1 J	ND
Chloromethane	0.4	ND	0.2 J	ND
Cyclohexane	NA	0.2 J	0.2 J	ND
Ethylbenzene	1	ND	ND	ND
Isopropylbenzene	NA	0.2 J	0.1 J	ND
Methyl tert-butyl ether (MTBE)	NA	0.4 J	0.3 J	ND
Methylcyclohexane	NA	0.5 J	0.4 J	ND
Naphthalene	12	ND	1 J	0.919
Toluene	4.6	ND	ND	ND
Xylenes, Total	3.6	0.2 J	ND	ND

MW-130A (7.5-12.5 ft bgs)				
	Concentration (ug/L)			
VOCs	7/9/1999	12/7/2005	5/17/2006	8/18/2006
2-Butanone (MEK)	ND	ND	1.1 J	ND
Acetone	8.6	ND	3.9 J	ND
Benzene	3.1	ND	ND	ND
Carbon Disulfide	ND	2.5	ND	ND
Chlorobenzene	1.5	1.8	1.3	1.7
Chloroethane	ND	ND	0.1 J	ND
Chloromethane	ND	ND	0.2 J	ND
Cyclohexane		0.2 J	0.2 J	ND
Ethylbenzene	1	ND	ND	ND
Isopropylbenzene		0.2 J	0.1 J	ND
Methyl tert-butyl ether (MTBE)		0.4 J	0.3 J	ND
Methylcyclohexane		0.5 J	0.4 J	ND
Naphthalene	12	ND	1 J	0.919 J
Toluene	4.6	ND	ND	ND
Xylenes, Total	3.6	0.2 J	ND	ND

MW-130A (5-15 ft bgs)		
	Concentration (ug/L)	
VOCs	12/19/2008	9/17/2009
1,2,4-Trimethylbenzene	6.4	NA
1,3,5-Trimethylbenzene	2.4 J	NA
Acetone	ND	9.7 J
Benzene	36.2	8.4
Chloromethane	ND	0.77 J
Cyclohexane	1.4 J	ND
Ethylbenzene	34.6	3.6
Isopropylbenzene	9.1	3.4
Methylcyclohexane	5.3	2.4 J
Naphthalene	88.2	ND
n-Propylbenzene	3.3 J	NA
Toluene	5.2	0.86 J
Xylene, m,p-	6.5	2
Xylene, o-	6.4	1.1
Xylenes, Total	13	3.1

MW-114A (3-13 ft bgs)				
	Concentration (ug/L)			
VOCs	3/4/2006	5/20/2006	8/19/2006	1/4/2009
1,2,4-Trimethylbenzene	NA	NA	34	2.2 J
1,3,5-Trimethylbenzene	NA	NA	5.9	ND
Benzene	280	110	154	16.6
Chloromethane	3 J	ND	ND	ND
Ethylbenzene	79	79	52.5	9.2
Isopropylbenzene	23	7.8	15.6	1.3 J
Naphthalene	1600	1100	280	58.1
n-Propylbenzene	NA	NA	2.9 J	0.42 J
Toluene	6.4 J	6.4	5.1	ND
Xylene, m,p-	NA	NA	11.3	0.76 J
Xylene, o-	NA	NA	22.9	0.63 J
Xylenes, Total	63	51	34.2	1.4

MW-103A (3-13 ft bgs)					
	Concentration (ug/L)				
VOCs	11/17/2005	2/20/2006	5/19/2006	8/22/2006	12/2/2008
1,2,4-Trichlorobenzene	ND	ND	13 J	ND	ND
1,2,4-Trimethylbenzene	NA	NA	NA	NA	738
1,3,5-Trimethylbenzene	NA	NA	NA	NA	216
Benzene	160	140	110	190	146
Carbon Disulfide	ND	11 J	ND	ND	ND
Cyclohexane	ND	ND	ND	ND	ND
Ethylbenzene	930	970	840	913	813
Isopropylbenzene	120	110	92	141	104
Methylcyclohexane	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND
Naphthalene	12000	11000	7600	12100	9880
n-Propylbenzene	NA	NA	NA	NA	56.8
Toluene	110	95	74	106	53.8
Xylene, m,p-	NA	NA	NA	1210	1020
Xylene, o-	NA	NA	NA	704	615
Xylenes, Total	2400	1900	1700	1910	1630

MW-121A (3-13 ft bgs)				
	Concentration (ug/L)			
VOCs	3/4/2006	5/20/2006	8/19/2006	1/4/2009
1,2,4-Trimethylbenzene			1.5 J	25.6
1,3,5-Trimethylbenzene			0.66 J	ND
Benzene	470	9.4	12.2	242
Carbon Disulfide	ND	0.2 J	ND	ND
Cyclohexane	2.7 J	ND	ND	ND
Ethylbenzene	120	2.2	1.6	47.6
Isopropylbenzene	41	1.1	1.2 J	35.5
Methylcyclohexane	4 J	0.6	ND	1.6 J
Naphthalene	660	ND	ND	161
n-Propylbenzene			0.3 J	16
Toluene	3.9 J	ND	ND	2.5
Xylene, m,p-			ND	12.8
Xylene, o-			1.7	27.3
Xylenes, Total	83	2.1	2	40.1

MW-105A (3-13 ft bgs)				
	Concentration (ug/L)			
VOCs	11/21/2005	2/23/2006	5/22/2006	12/10/2008
1,2,4-Trimethylbenzene	NA	NA	NA	403
1,2-Dichlorobenzene	1.1 J	ND	ND	ND
1,3,5-Trimethylbenzene	NA	NA	NA	350
Benzene	81	86	88	71.5
Carbon Disulfide	1.3 J	ND	ND	ND
Ethylbenzene	83	90	83	100
Isopropylbenzene	88	90	81	88.3
Naphthalene	4400	7500	3100	2060
n-Propylbenzene	NA	NA	NA	14.5 J
Toluene	7	7.8 J	7.8 J	6.6
Xylene, m,p-	NA	NA	NA	14.8
Xylene, o-	NA	NA	NA	45.4
Xylenes, Total	79	65	57	60.3

MW-119A (3-13 ft bgs)			
	Concentration (ug/L)		
VOCs	12/7/2005	3/4/2006	5/20/2006
Benzene	9.8	4.7	12
Carbon Disulfide	ND	ND	0.2 J
Chloroethane	ND	1.1	0.7
Chloromethane	ND	0.2 J	0.2 J
Cyclohexane	0.2 J	ND	ND
Ethylbenzene	11	2.9 J	3.2
Isopropylbenzene	1.4	0.6	0.8
Methylcyclohexane	0.2 J	ND	ND
Naphthalene	10	8	3 J
Toluene	1.6	0.4 J	ND
Xylenes, Total	4	1.5	1.3

MW-120A (3-13 ft bgs)				
	Concentration (ug/L)			
VOCs	12/5/2005	2/14/2006	5/15/2006	8/15/2006
1,2-Dichloroethene, cis-	0.2 J	0.2 J	0.2 J	ND
Carbon Disulfide	0.2 J	ND	ND	ND
Chloroethane	ND	ND	0.1 J	ND
Chloromethane	ND	ND	0.1 J	ND
Naphthalene	1 J	ND	ND	ND

MW-106A (3-13 ft bgs)					
	Concentration (ug/L)				
VOCs	12/6/2005	2/13/2006	5/16/2006	8/16/2006	12/4/2008
1,2,4-Trichlorobenzene	ND	0.5 J	ND	ND	ND
1,2,4-Trimethylbenzene	NA	NA	NA	NA	19.3
1,2-Dichloroethene, cis-	1 J	ND	ND	ND	ND
1,3,5-Trimethylbenzene	NA	NA	NA	NA	18.4
2-Butanone (MEK)	ND	11 J	11 J	ND	ND
2-Hexanone	ND	ND	6 J	ND	ND
Acetone	ND	28 J	ND	ND	ND
Benzene	25	63	45	17.8	25.3
Carbon Disulfide	2.2 J	ND	ND	ND	ND
Chloroethane	5.5	ND	3.1	ND	ND
Chloromethane	2.7 J	ND	0.6 J	ND	ND
Cyclohexane	29	81	42	27.5	26.1
Ethylbenzene	18	54	37	22.1	26.2
Isopropylbenzene	2.8 J	5.4	3.2	4.3	6.3
Methylcyclohexane	85	170	120	105	108
Naphthalene	4 J	4 J	4 J	2.4	1.55
n-Propylbenzene	NA	NA	NA	NA	3.3 J
Toluene	150	420	490	193	1.3
Xylene, m,p-	NA	NA	NA	128	213
Xylene, o-	NA	NA	NA	30.7	17.5
Xylenes, Total	130	420	290	159	230

LEGEND

- Monitoring Well
- Shoreline
- 100 ft. Buffer
- Quanta Property Boundary

Notes:
ND = Not Detected
NA = Not Analyzed

0 40 80 ft.

CH2MHILL

VOCS DETECTED IN SHALLOW GROUNDWATER WITHIN 100 FT OF THE 115 RIVER ROAD BUILDING

Honeywell International
Quanta Resources
Superfund Site
Edgewater, New Jersey

April 25, 2013

FIGURE 1

DRAFT

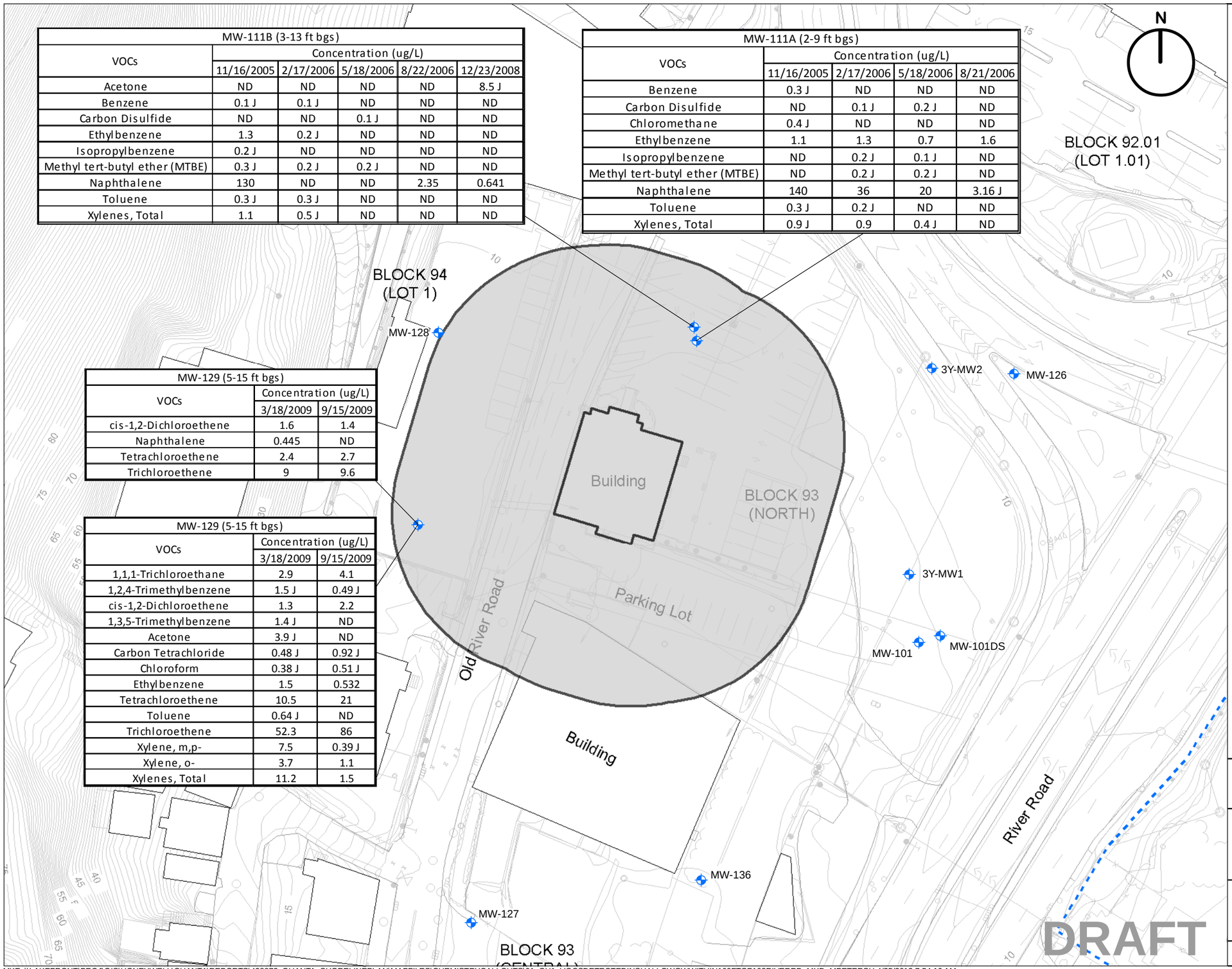
MKE \\LAKEFRONT\PROJGIS\HONEYWELL\QUANTAIREPORTS\428872_QUANTA_SHORELINEPLAN\MAPFILES\CHEMISTRYCALLOUTS\01_OU1_VOCSDETECTEDINSHALLOWGWWITHIN100FTOF103RIVERRD..MXD MPETERSH 4/25/2013 11:32:09 AM

MW-111B (3-13 ft bgs)					
VOCs	Concentration (ug/L)				
	11/16/2005	2/17/2006	5/18/2006	8/22/2006	12/23/2008
Acetone	ND	ND	ND	ND	8.5 J
Benzene	0.1 J	0.1 J	ND	ND	ND
Carbon Disulfide	ND	ND	0.1 J	ND	ND
Ethylbenzene	1.3	0.2 J	ND	ND	ND
Isopropylbenzene	0.2 J	ND	ND	ND	ND
Methyl tert-butyl ether (MTBE)	0.3 J	0.2 J	0.2 J	ND	ND
Naphthalene	130	ND	ND	2.35	0.641
Toluene	0.3 J	0.3 J	ND	ND	ND
Xylenes, Total	1.1	0.5 J	ND	ND	ND

MW-111A (2-9 ft bgs)				
VOCs	Concentration (ug/L)			
	11/16/2005	2/17/2006	5/18/2006	8/21/2006
Benzene	0.3 J	ND	ND	ND
Carbon Disulfide	ND	0.1 J	0.2 J	ND
Chloromethane	0.4 J	ND	ND	ND
Ethylbenzene	1.1	1.3	0.7	1.6
Isopropylbenzene	ND	0.2 J	0.1 J	ND
Methyl tert-butyl ether (MTBE)	ND	0.2 J	0.2 J	ND
Naphthalene	140	36	20	3.16 J
Toluene	0.3 J	0.2 J	ND	ND
Xylenes, Total	0.9 J	0.9	0.4 J	ND

MW-129 (5-15 ft bgs)		
VOCs	Concentration (ug/L)	
	3/18/2009	9/15/2009
cis-1,2-Dichloroethene	1.6	1.4
Naphthalene	0.445	ND
Tetrachloroethene	2.4	2.7
Trichloroethene	9	9.6

MW-129 (5-15 ft bgs)		
VOCs	Concentration (ug/L)	
	3/18/2009	9/15/2009
1,1,1-Trichloroethane	2.9	4.1
1,2,4-Trimethylbenzene	1.5 J	0.49 J
cis-1,2-Dichloroethene	1.3	2.2
1,3,5-Trimethylbenzene	1.4 J	ND
Acetone	3.9 J	ND
Carbon Tetrachloride	0.48 J	0.92 J
Chloroform	0.38 J	0.51 J
Ethylbenzene	1.5	0.532
Tetrachloroethene	10.5	21
Toluene	0.64 J	ND
Trichloroethene	52.3	86
Xylene, m,p-	7.5	0.39 J
Xylene, o-	3.7	1.1
Xylenes, Total	11.2	1.5



LEGEND

- Monitoring Well
- 100 ft. Buffer
- Quanta Property Boundary

Notes:
ND = Not Detected
NA = Not Analyzed

0 30 60 ft.

CH2MHILL

OLD VOCS DETECTED IN SHALLOW GROUNDWATER WITHIN 100 FT OF THE 163 RIVER ROAD BUILDING

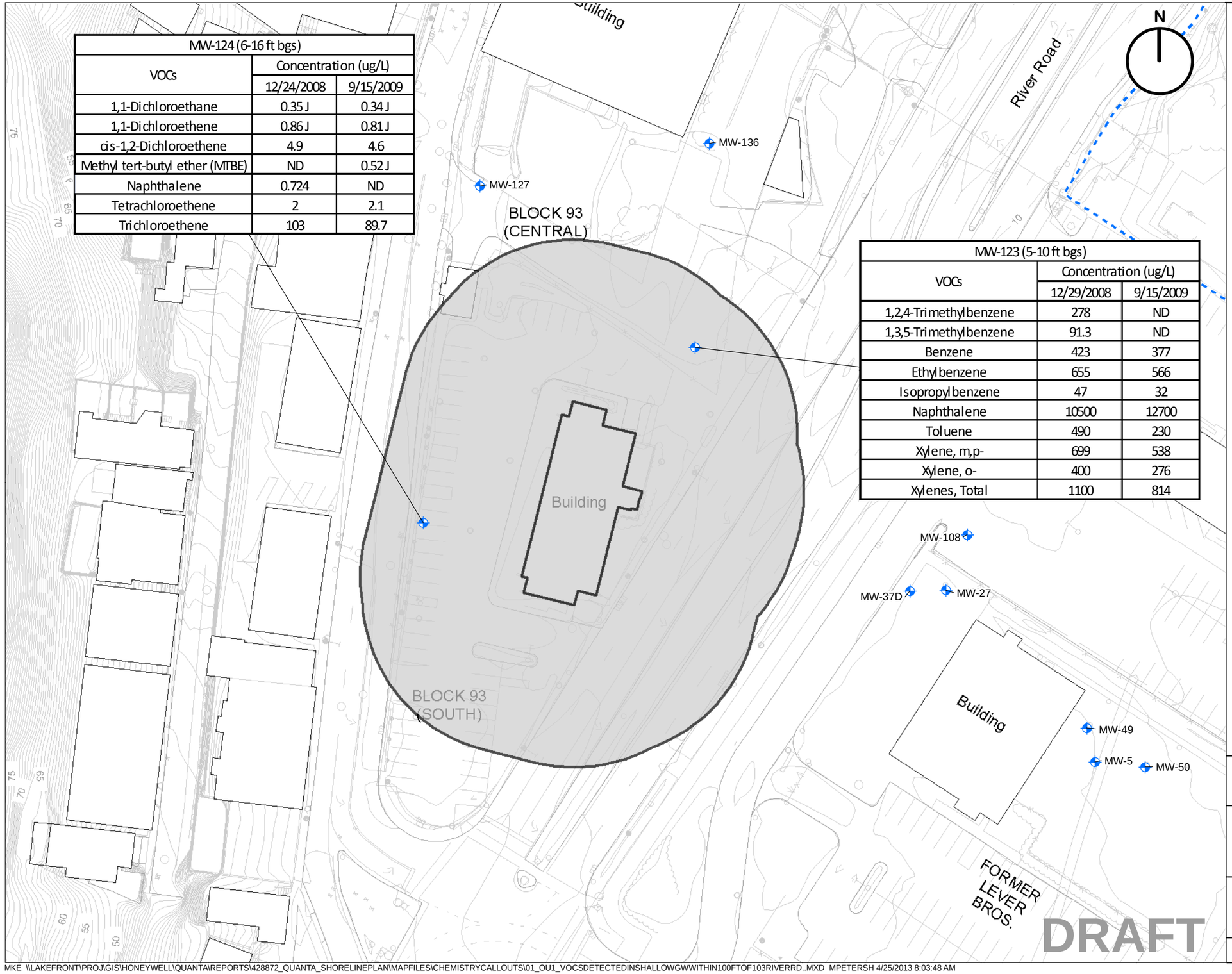
Honeywell International
Quanta Resources
Superfund Site
Edgewater, New Jersey

April 25, 2013 | **FIGURE 1**

MKE \\LAKEFRONT\PROJ\GIS\HONEYWELL\QUANTA\REPORTS\428872_QUANTA_SHORELINEPLAN\MAPFILES\CHEMISTRYCALLOUTS\01_OU1_VOCSDETECTEDINSHALLOWGWWITHIN100FTOF103RIVERRD..MXD MPETERSH 4/25/2013 7:54:10 AM

MW-124 (6-16 ft bgs)		
VOCs	Concentration (ug/L)	
	12/24/2008	9/15/2009
1,1-Dichloroethane	0.35 J	0.34 J
1,1-Dichloroethene	0.86 J	0.81 J
cis-1,2-Dichloroethene	4.9	4.6
Methyl tert-butyl ether (MTBE)	ND	0.52 J
Naphthalene	0.724	ND
Tetrachloroethene	2	2.1
Trichloroethene	103	89.7

MW-123 (5-10 ft bgs)		
VOCs	Concentration (ug/L)	
	12/29/2008	9/15/2009
1,2,4-Trimethylbenzene	278	ND
1,3,5-Trimethylbenzene	91.3	ND
Benzene	423	377
Ethylbenzene	655	566
Isopropylbenzene	47	32
Naphthalene	10500	12700
Toluene	490	230
Xylene, m,p-	699	538
Xylene, o-	400	276
Xylenes, Total	1100	814



LEGEND

- Monitoring Well
- 100 ft. Buffer
- Quanta Property Boundary

Notes:
ND = Not Detected
NA = Not Analyzed

0 30 60 ft.

CH2MHILL

VOCS DETECTED IN SHALLOW GROUNDWATER WITHIN 100 FT OF THE 103 RIVER ROAD BUILDING

Honeywell International
Quanta Resources
Superfund Site
Edgewater, New Jersey

April 24, 2013 | **FIGURE 1**

MKE \\LAKEFRONT\PROJ\GIS\HONEYWELL\QUANTA\REPORTS\428872_QUANTA_SHORELINEPLAN\MAPFILES\CHEMISTRYCALLOUTS\01_OU1_VOCSDETECTEDINSHALLOWGWWITHIN100FTOF103RIVERRD..MXD MPETERSH 4/25/2013 8:03:48 AM

Appendix I
Response to EPA Comments – March 9, 2016

ATTACHMENT I

Response to Comments

This attachment presents responses to comments from the U.S. Environmental Protection Agency (USEPA) on the results of 2015/2016 vapor intrusion (VI) monitoring events at the 115 River Road, 163 Old River Road, and 103 River Road buildings at the Quanta Resources Corporation Superfund Site (site), Operable Unit 1 (OU1). These comments were received by CH2M on March 9, 2016.

General Comments

Comment 1:

As a result of the recently updated Vapor Intrusion Guidance (2015), attenuation factors from sub-slab to indoor air have changed. The sub-slab vapor concentration is assumed to dilute 33-fold before reaching the indoor air. As a result, the indoor air screening levels should be multiplied by 33 rather than 10 (less conservative) for sub-slab screening purposes. Please make this correction. Crawl spaces should continue to be evaluated as indoor air.

Response to Comment 1:

The change in the attenuation factor from the sub-slab to indoor air has been acknowledged. Screening levels have been updated accordingly in all applicable documents using the EPA Vapor Intrusion Screening Level (VISL) Calculator.

Comment 2:

Based on the report and some of the field notes, temperatures were in the 50s-60s during the last sampling round and sunny the first two days of sampling. Were windows and doors closed and buildings mostly sealed or is there reason to believe that they could have been open and thus samples biased low? Please include an explanation.

Response to Comment 2:

Unseasonably warm weather, temperatures in the 50s-60s degree Fahrenheit, occurred during the week of sampling. The field team communicated with the tenants the importance of keeping the windows and doors shut throughout the duration of the sample collection. Although this was communicated, it was typically only communicated to one or several people within the office space. Whether this was communicated to other employees that occupied the space throughout the day and night is unknown, and whether this instruction was followed throughout the duration of the sampling collection by all occupants is also unknown. To the best of our knowledge, we believe that windows and doors were mostly sealed throughout sample collection. All windows and doors were sealed when canisters were deployed, when checked several times throughout the day, during the 20 hour check, and when collected after 24 hours.

There was one exception to this, Suite 824 in Building 8 (Q1-IA-42), where windows were open when the canister was collected. This has been added to the deviations portion of Appendix B.

Comment 3:

As indicated in the report, there was one minor exceedance of naphthalene in the indoor air of 115 River Road, Building 8 on the third floor, adjacent to the elevator shaft at 3.8 ug/m3 (sample Q1-IA-43; Commercial IASL at 10^{-5} risk = 3.6 ug/m3). It was detected at 0.62 ug/m3 on the second floor and 1.2 in the Building 7/8 basement indoor air. In the Building 8 elevator shaft, naphthalene was at 4.0 and 3.2 ug/m3. Based on the data, there is a potential for the elevator shaft to act as a conduit, transporting sub-slab vapors into the upper levels of the building. EPA recommends continued monitoring.

Response to Comment 3:

This comment has been acknowledged. As stated in the Vapor Intrusion 2015/2016 Results Report and in accordance with the ROD, Honeywell will continue VI monitoring at 115 River Road and other affected properties as part of the interim remedy and will continue to do so until the remedial action commences.

Comment 4:

There are no VI concerns at 103 or 163 Old River Rd.

Response to Comment 4:

This comment has been acknowledged.

References

CH2M. 2014. *Work Plan for Winter 2015/2016 Vapor Intrusion Monitoring Events at 115 River Road, 163 Old River Road, and 103 River Road*. December.

New Jersey Department of Environmental Protection (NJDEP). 2013. *Vapor Intrusion Technical Guidance* and the associated NJDEP Vapor Intrusion Screening Level Tables. March.